



# Lexington County School District One

Solicitation Number: **BT2025.1**  
 Date Issued: **07/15/2024**  
 Procurement Officer: **Jessica Monts**  
 Phone: **803-821-1109**  
 E-Mail Address: **mmonts@lexington1.net**

## AMENDMENT OF SOLICITATION

### PRINTING SERVICES FOR IMMERSION WORKBOOKS

AMENDMENT/MODIFICATION NO: **One**

1. ISSUED BY: **Lexington County School District One**  
**100 Tarrar Springs Road, Procurement Office**  
**Lexington, South Carolina 29072**  
**Attn: Elizabeth Marsh, Director of Procurement**

2. CONTRACTOR'S NAME AND ADDRESS:

3. AMENDMENT OF SOLICITATION NO.:  
**# BT2025.1**

4. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS:

THE ABOVE NUMBERED SOLICITATION IS AMENDED AS SET FORTH IN BLOCK 5.

5. DESCRIPTION OF AMENDMENT:

**Vendor questions and district responses beginning on page 2.**

6.  CONTRACTOR/OFFEROR IS TO SIGN THIS DOCUMENT AND SUBMIT WITH THEIR RESPONSE TO THE SOLICITATION. FAILURE TO RETURN WITH BID MAY RESULT IN REJECTION OF YOUR OFFER.

7. CONTRACTOR'S SIGNATURE

8. CONTRACTOR'S NAME AND ADDRESS:

BY : \_\_\_\_\_  
 (SIGNATURE OF AUTHORIZED REPRESENTATIVE)

\_\_\_\_\_

9. DATE SIGNED : \_\_\_\_\_

\_\_\_\_\_

10. LEXINGTON SCHOOL DISTRICT ONE

11. NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

**Jessica Monts**

BY: *Jessica Monts*  
 (SIGNATURE OF AUTHORIZED REPRESENTATIVE)

**Procurement Manager**

12. DATE SIGNED: 07/15/2024

## **AMENDMENT - Questions and Answers**

**Question: Open Records FOIA Request: Lexington County Schools SC, We are asking for the prior bid results, not the results for the current bid which has not yet opened.**

**Answer: All FOIA Requests must be submitted through the FOIA Request link found on the Lexington County School District One's website.**

**Question: The chart states 350,803 total between German, Mandarin and French and state the unit measure is in pages. How many pages per book will that be?**

**Answer: See revised solicitation**

**Question: The bid sheet states delivery to multiple locations, so that we can provide a more accurate shipping estimate, would I be able to receive the addresses?**

**Answer: See revised solicitation**

**Question: Are the quantities listed in the section titled Chart below provided for bidding purposes, under German/Mandarin/French the quantity estimates?**

**Answer: See revised solicitation**

**Question: Is it possible to get the annual quantities order last as an estimate of the quantity order for 1 year?**

**Answer: See revised solicitation. Current year quantities provided.**

**Question: Can you confirm the handbook pages will print in full color?**

**Answer: See revised solicitation.**

**Question: Are there bid tabulation available from the last time the project was printed?**

**Answer: See answer to question #1.**

**Question: Are we to include samples with our bid response.**

**Answer: Yes**

**Question: What is Volume 1(the languages its in, the number of books, and the number of pages per book)?**

**Answer: See revised solicitation**

**Question: What is Volume 2 (the languages it's in, the number of books, and the number of pages per book)?**

**Answer: See revised solicitation**

**Question: What schools will Volume 1 and 2 be sent to?**

**Answer: See revised solicitation**

**IMPORTANT NOTICE:** In order to make the solicitation document easier to read, the district has opted to issue a completely new document. This approach has been selected to ensure the clarity of the contract documents during both the “Pre-Award” and “Post Award” phases of this procurement. Prospective Offerors should discard the original solicitation document and use this document when preparing their on-line bids. To assist your review of the amendment, we have endeavored to highlight changes in yellow. To use this feature, Offerors will need to view the electronic version of this document. Despite our best efforts, there is a chance that a change was inadvertently left unhighlighted. Therefore, Offerors are cautioned that they are responsible to review the content of the entire document and cannot rely detrimentally on highlights identifying all changes.

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# Lexington County School District One

## INVITATION FOR BIDS

Solicitation Number: BT2025.1  
Date Issued: July 11, 2024  
Procurement Officer: **Jessica Monts, Procurement Manager**

*Jessica Monts*

Phone: **803-821-1109**  
E-Mail Address: **mmonts@lexington1.net**

### DESCRIPTION: Printing Services for Immersion Workbooks

*The Term "Offer" Means Your "Bid" or "Proposal". Your offer must be submitted in a sealed package. Solicitation Number & Opening Date must appear on package exterior. See "Submitting Your Offer" provision.*

SUBMIT YOUR SEALED OFFER TO THE FOLLOWING ADDRESS BELOW:

#### PHYSICAL/MAILING ADDRESS:

Lexington School District One  
Attn: Procurement Services/Jessica Monts  
100 Tarrar Springs Road  
Lexington, South Carolina 29072

**SUBMIT OFFER BY: July 18, 2024, 3:00 p.m.**

(See "Deadline For Submission Of Offer" provision)

Questions Must Be Received By: July 15, 2024, 3:00 p.m.

NUMBER OF COPIES TO BE SUBMITTED: **One Original**

CONFERENCE TYPE: N/A  
DATE & TIME: N/A

(As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions)

LOCATION: N/A

**AWARD & AMENDMENTS**

Award will be posted at the Physical Address above on July 29, 2024. The award, notice of this solicitation, any amendments, and any related notices will be posted at the following web address:

<https://www.lexington1.net/Page/4030>

You must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of thirty (30) calendar days after the Opening Date.

(See

"Signing Your Offer" provisions.)

**NAME OF OFFEROR:**

(full legal name of business submitting the offer)

**AUTHORIZED SIGNATURE:**

(Person must be authorized to submit binding offer to contract on behalf of Offeror.)

**TITLE:**

(business title of person signing above)

**PRINTED NAME:**

(printed name of person signing above)

**DATE SIGNED:**

**OFFEROR'S TYPE OF ENTITY:**

(Check one)

Sole Proprietorship

Partnership

Corporate entity (not tax-exempt)

Tax exempt corporate entity

Government entity (federal, state, or local)

Other \_\_\_\_\_

(See "Signing your Offer" provision)

**INSTRUCTIONS REGARDING OFFEROR'S NAME:** Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.

**STATE OF INCORPORATION**

(If you are a corporation, identify the state of incorporation.)

**TAXPAYER IDENTIFICATION NO.**

(See "Taxpayer Identification Number" provision)

**PAGE TWO**

**(Return Page Two with Your Offer)**

|  |   |            |            |            |            |
|--|---|------------|------------|------------|------------|
| HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)<br>_____<br>_____<br>_____   | NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)<br>_____<br>_____<br>_____ |            |            |            |            |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">Area Code:</td> <td style="width:25%;">Number:</td> <td style="width:25%;">Extension:</td> <td style="width:35%;">Facsimile:</td> </tr> </table> |   | Area Code: | Number:    | Extension: | Facsimile: |
| Area Code:   | Number:   | Extension: | Facsimile: |            |            |
| E-Mail Address: _____  |   |            |            |            |            |

|  |   |
|--|---|
| PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause)<br>_____<br>_____<br>_____<br><br><input type="checkbox"/> Payment Address same as Home Office Address<br><input type="checkbox"/> Payment Address same as Notice Address <b>(check only one)</b> | ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses)<br>_____<br>_____<br>_____<br><br><input type="checkbox"/> Order Address same as Home Office Address<br><input type="checkbox"/> Order Address same as Notice Address <b>(check only one)</b> |
|--|---|

**ACKNOWLEDGMENT OF AMENDMENTS**  
 Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)

| Amendment No. | Amendment Issue Date | Amendment No. | Amendment Issue Date | Amendment No. | Amendment Issue Date | Amendment No. | Amendment Issue Date |
|---------------|----------------------|---------------|----------------------|---------------|----------------------|---------------|----------------------|
|               |                      |               |                      |               |                      |               |                      |

|   |                      |                      |                      |                         |
|---|----------------------|----------------------|----------------------|-------------------------|
| DISCOUNT FOR PROMPT PAYMENT<br>(See "Discount for Prompt Payment" clause) | 10 Calendar Days (%) | 20 Calendar Days (%) | 30 Calendar Days (%) | _____ Calendar Days (%) |
|---|----------------------|----------------------|----------------------|-------------------------|

**MINORITY PARTICIPATION:**  
 Are you a South Carolina Certified Minority Vendor? **Yes** \_\_\_\_\_ **No** \_\_\_\_\_  
 If yes, South Carolina Certification # \_\_\_\_\_

**PREFERENCES - A NOTICE TO VENDORS:** On June 16, 2009, the South Carolina General Assembly rewrote the law governing preferences available to in-state vendors, vendors using in- state subcontractors, and vendors selling in-state or US end products. This law appears in Section 11-35-1524 of the South Carolina Code of Laws. A summary of the new preferences is available at [www.procurement.sc.gov/preferences](http://www.procurement.sc.gov/preferences) [www.procurement.sc.gov/preferences](http://www.procurement.sc.gov/preferences). ALL THE PREFERENCES MUST BE CLAIMED AND ARE APPLIED BY LINE ITEM, REGARDLESS OF WHETHER AWARD IS MADE BY ITEM OR LOT. VENDORS ARE CAUTIONED TO CAREFULLY REVIEW THE STATUTE BEFORE CLAIMING ANY PREFERENCES. THE REQUIREMENTS TO QUALIFY HAVE CHANGED. IF YOU REQUEST A PREFERENCE, YOU ARE CERTIFYING THAT YOUR OFFER QUALIFIES FOR THE PREFERENCE YOU'VE CLAIMED. IMPROPERLY REQUESTING A PREFERENCE CAN HAVE SERIOUS CONSEQUENCES. [11-35-1524(E)(4)&(6)]

|   |  |
|---|--|
| OFFERORS REQUESTING THIS PREFERENCE MUST INITIAL HERE: _____<br><ul style="list-style-type: none"> <li>● ADDRESS AND PHONE OF IN-STATE OFFICE:<br/>           _____<br/>           _____<br/>           _____<br/>           _____</li> </ul><br><input type="checkbox"/> In-State Office Address same as Home Office Address.<br><input type="checkbox"/> In-State Office Address same as Notice Address.<br><b>(Check only one)</b> | <p><b>IF THIS PREFERENCE APPLIES TO THIS PROCUREMENT, PART VII (BIDDING SCHEDULE) WILL INCLUDE A PLACE TO CLAIM THE PREFERENCE. OFFERORS REQUESTING THIS PREFERENCE MUST CHECK THE APPROPRIATE SPACES ON THE BIDDING SCHEDULE.</b></p> |
|---|--|

## I. SCOPE OF SOLICITATION

OVERVIEW: The intent of Lexington County School District One is to seek qualified source(s) to provide **yearly** printing services for Immersion Workbooks.

ACQUIRE SERVICES & SUPPLIES / EQUIPMENT: The purpose of this solicitation is to acquire services and supplies or equipment complying with the enclosed description and/or specifications and conditions.

~~MAXIMUM CONTRACT PERIOD – ESTIMATED: July 30, 2024 through July 29, 2029. Dates provided are estimates only. Any resulting contract will begin on the date specified in the notice of award. See clause entitled "Term of Contract – Effective Date / Initial Contract Period".~~

~~This contract has a one-year initial term, and four one-year renewal terms. The potential maximum contract period is five years.~~

## II. INSTRUCTIONS TO OFFERORS - A. GENERAL INSTRUCTIONS

AMENDMENTS TO SOLICITATION: (a) The Solicitation may be amended at any time prior to opening. All actual and prospective Offerors should monitor the following web site for the issuance of Amendments: <https://www.lexington1.net/Page/4030>. (b) Offerors shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on Page Two, (3) by letter, or (4) by submitting a bid that indicates in some way that the bidder received the amendment. (c) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

AWARD NOTIFICATION: Notice regarding any award, cancellation of award, or extension of award will be posted at the location and on the date specified on the Cover Page or, if applicable, any notice of extension of award. Should the contract resulting from this Solicitation have a total or potential value of one hundred thousand dollars or more, such notice will be sent to all Offerors responding to the Solicitation and any award will not be effective until after seven business days of posting the notice.

BID / PROPOSAL AS OFFER TO CONTRACT: By submitting Your Bid or Proposal, You are offering to enter into a contract with the District. Without further action by either party, a binding contract shall result upon final award. Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror on the Cover Page. An Offer may be submitted by only one legal entity; “joint bids” are not allowed.

BID ACCEPTANCE PERIOD: In order to withdraw Your Offer after the minimum period specified on the Cover Page, You must notify the Procurement Officer in writing.

BID IN ENGLISH & DOLLARS: Offers submitted in response to this solicitation shall be in the English language and in US dollars, unless otherwise permitted by the Solicitation.

CERTIFICATE OF INDEPENDENT PRICE DETERMINATION:

GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.

(a) By submitting an offer, the offeror certifies that-

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to-

(i) Those prices;

(ii) The intention to submit an offer; or

(iii) The methods or factors used to calculate the prices offered.

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory-

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or

(2)(i) Has been authorized, in writing, to act as agent for the offeror's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification [As used in this subdivision (b)(2)(i), the term "principals" means the person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal];

(ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.

(c) If the offeror deletes or modifies paragraph (a)(2) of this certification, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure. [02-2A032-1]

CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS:

(a)(1) By submitting an Offer, Offeror certifies, to the best of its knowledge and belief, that

(i) Offeror and/or any of its Principals-

(A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;

(B) Have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

- (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
- (ii) Offeror has not, within a three-year period preceding this offer, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (b) Offeror shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) If Offeror is unable to certify the representations stated in paragraphs (a)(1), Offer must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Offeror's responsibility. Failure of the Offeror to furnish additional information as requested by the Procurement Officer may render the Offeror non-responsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the District, the Procurement Officer may terminate the contract resulting from this solicitation for default.

CODE OF LAWS AVAILABLE: The South Carolina Code of Laws is available at <http://www.scstatehouse.gov/code/statmast.php>. The District's Procurement Code is available at <https://www.lexington1.net/Page/4028>.

COMPLETION OF FORMS / CORRECTION OF ERRORS: All prices and notations should be printed in ink or typewritten. Errors should be crossed out, corrections entered and initialed by the person signing the bid. Do not modify the solicitation document itself including the bid schedule.

DEADLINE FOR SUBMISSION OF OFFER: Any offer received after the Procurement Officer or his designee has declared that the time set for opening has arrived, shall be rejected unless the offer has been delivered to the designated Procurement Office or the District Office's mail room which services that Procurement Office prior to the bid opening which is located at the physical address on the first page of the solicitation.

DEFINITIONS: EXCEPT AS OTHERWISE PROVIDED HEREIN, THE FOLLOWING DEFINITIONS ARE APPLICABLE TO ALL PARTS OF THE SOLICITATION.

AMENDMENT – means a document issued to supplement the original solicitation document.

BOARD – means the Lexington School District One Board of Trustees.

BUYER – means the Procurement Officer.

CHANGE ORDER - means any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of any contract accomplished by mutual agreement of the parties to the contract.

CONTRACT - See clause entitled "Contract Documents & Order of Precedence."

CONTRACT MODIFICATION – means a written order signed by the Procurement Officer, directing the contractor to make changes which the changes clause of the contract authorizes the Procurement Officer to order without the consent of the contractor.

CONTRACTOR - means the Offeror receiving an award as a result of this solicitation.

COVER PAGE – means the top page of the original solicitation on which the solicitation is identified by number. Offerors are cautioned that Amendments may modify information provided on the Cover Page.

DISTRICT – means Lexington County School District One.

OFFER – means the bid or proposal submitted in response this solicitation. The terms "Bid" and "Proposal" are used interchangeably with the term "Offer."

OFFEROR – means the single legal entity submitting the offer. The term "Bidder" is used interchangeably with the term "Offeror." See bidding provisions entitled "Signing Your Offer" and "Bid/Proposal As Offer To Contract."

PAGE TWO – means the second page of the original solicitation, which is labeled Page Two.

PROCUREMENT OFFICER – means the person, or his successor, identified as such on the Cover Page.

SOLICITATION – means this document, including all its parts, attachments, and any Amendments.

SUBCONTRACTOR – means any person having a contract to perform work or render service to Contractor as a part of the Contractor's agreement arising from this solicitation.

WORK – means all labor, materials, equipment, services, or property of any type, provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract.

YOU and YOUR – means Offeror.

DRUG FREE WORK PLACE CERTIFICATION: By submitting an Offer, Contractor certifies that, if awarded a contract, Contractor will comply with all applicable provisions of The Drug-free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

DUTY TO INQUIRE: Offeror, by submitting an Offer, represents that it has read and understands the Solicitation and that its Offer is made in compliance with the Solicitation. Offerors are expected to examine the Solicitation thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements in the Solicitation. Failure to do so will be at the Offeror's risk. Offeror assumes responsibility for any patent ambiguity in the Solicitation that Offeror does not bring to the District's attention.

ETHICS ACT: Ethics Certificate: By submitting an offer, the offeror certifies that the offeror has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision.

If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-1150 to the procurement officer at the same time the law requires the statement to be filed.

**OMIT TAXES FROM PRICE:** Do not include any sales or use taxes in Your price that the District may be required to pay.

**OPEN TRADE REPRESENTATION:** By submitting an Offer, Offeror represents that Offeror is not currently engaged in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300.

**PROTESTS:** If you are aggrieved in connection with the solicitation or award of the contract, you may be entitled to protest, but only as provided in Section 11-35-4210. To protest a solicitation, you must submit a protest within fifteen days of the date the applicable solicitation document is issued. To protest an award, you must (i) submit notice of your intent to protest within seven business days of the date the award notice is posted, and (ii) submit your actual protest within fifteen days of the date the award notice is posted. Both protests and notices of intent to protest must be in writing and must be received by the appropriate Chief Procurement Officer within the time provided. See clause entitled "Protest". The grounds of the protest and the relief requested must be set forth with enough particularity to give notice of the issues to be decided.

[Article 17 – 4210 of the District’s Procurement Code].

The rights and remedies granted under Article 17 – 4210 are not available for contracts with an actual or potential value of less than fifty thousand dollars.

**PUBLIC OPENING:** Offers will be publicly opened at the date / time and at the location identified on the Cover Page, or last Amendment, whichever is applicable.

**QUESTIONS FROM OFFERORS:** (a) Any prospective offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing. Questions must be received by the Procurement Officer no later than five (5) days prior to opening unless otherwise stated on the Cover Page. Label any communication regarding your questions with the name of the procurement officer, and the solicitation's title and number. Oral explanations or instructions will not be binding. Any information given a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an Amendment to the solicitation, if that information is necessary for submitting offers or if the lack of it would be prejudicial to other prospective offerors. (b) The District seeks to permit maximum practicable competition.

Offerors are urged to advise the Procurement Officer – as soon as possible – regarding any aspect of this procurement, including any aspect of the Solicitation, that unnecessarily or inappropriately limits full and open competition.

**REJECTION/CANCELLATION:** The District may cancel this solicitation in whole or in part. The District may reject any or all proposals in whole or in part. [Article 5 - 1710 of the District’s Procurement Code]

#### RESPONSIVENESS / IMPROPER OFFERS:

(a) Bid as Specified. Offers for supplies or services other than those specified will not be considered unless authorized by the Solicitation.

(b) Multiple Offers. Offerors may submit more than one Offer, provided that each Offer has significant differences other than price. Each separate Offer must satisfy all Solicitation requirements. If this solicitation is an Invitation for Bids, each separate offer must be submitted as a separate document. If this solicitation is a Request for Proposals, multiple offers may be submitted as one document, provided that you clearly differentiate between each offer and you submit a separate cost proposal for each offer, if applicable.

(c) Responsiveness. Any Offer which fails to conform to the material requirements of the Solicitation may be rejected as nonresponsive. Offers which impose conditions that modify material requirements of the Solicitation may be rejected.

If a fixed price is required, an Offer will be rejected if the total possible cost to the District cannot be determined. Offerors will not be given an opportunity to correct any material nonconformity. Any deficiency resulting from a minor informality may be cured or waived at the sole discretion of the Procurement Officer.

(d) Price Reasonableness: Any offer may be rejected if the Procurement Officer determines in writing that it is unreasonable as to price.

(e) Unbalanced Bidding. The District may reject an Offer as nonresponsive if the prices bid are materially unbalanced between line items or sub-line items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the District even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

**RESTRICTIONS APPLICABLE TO OFFERORS:** Violation of these restrictions may result in disqualification of your offer, suspension or debarment, and may constitute a violation of the state Ethics Act. (a) After issuance of the solicitation, *you agree not to discuss this procurement activity in any way with the District or its employees, agents or officials.* All communications must be solely with the Procurement Officer. This restriction may be lifted by express written permission from the Procurement Officer. This restriction expires once a contract has been formed. (b) Unless otherwise approved in writing by the Procurement Officer, *you agree not to give anything to the District or its employees, agents or officials prior to award.*

**SIGNING YOUR OFFER:** Every Offer must be signed by an individual with actual authority to bind the Offeror.

(a) If the Offeror is an individual, the Offer must be signed by that individual. If the Offeror is an individual doing business as a firm, the Offer must be submitted in the firm name, signed by the individual, and state that the individual is doing business as a firm. (b) If the Offeror is a partnership, the Offer must be submitted in the partnership name, followed by the words "by its Partner," and signed by a general partner. (c) If the Offeror is a corporation, the Offer must be submitted in the corporate name, followed by the signature and title of the person authorized to sign. (d) An Offer may be submitted by a joint venturer involving any combination of individuals, partnerships, or corporations. If the Offeror is a joint venture, the Offer must be submitted in the name of the Joint Venture and signed by every participant in the joint venture in the manner prescribed in paragraphs (a) through (c) above for each type of participant. (e) If an Offer is signed by an agent, other than as stated in subparagraphs (a) through (d) above, the Offer must state that it has been signed by an Agent. Upon request, Offeror must provide proof of the agent's authorization to bind the principal.

**DISTRICT OFFICE CLOSINGS:** If an emergency or unanticipated event interrupts normal District Office processes so that offers cannot be received at the District Office for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal District Office processes resume. In lieu of an automatic extension, an Amendment may be issued to reschedule bid opening. If District Office is closed at the time a pre-bid or pre-proposal conference is scheduled, an Amendment will be issued to reschedule the conference.

**SUBMITTING CONFIDENTIAL INFORMATION:** For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Offeror contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged and confidential, as that phrase is used in Section 11-35-410.

For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Offeror contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "PROTECTED" every page, or portion thereof, that Offeror contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire response (bid, proposal, quote, etc.) as confidential, trade secret, or protected! If your response, or any part thereof, is improperly marked as confidential or trade secret or protected, the District may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation or request, Offeror (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, and documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, and (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the District will detrimentally rely on Offeror's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Offeror agrees to defend, indemnify and hold harmless the District, its officers and employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the District withholding information that Offeror marked as "confidential" or "trade secret" or "PROTECTED". (All references to S.C. Code of Laws.)

**SUBMITTING YOUR OFFER OR MODIFICATION:** (a) Offers and offer modifications shall be submitted in sealed envelopes or packages – (1) Addressed to the office specified in the Solicitation; and (2) Showing the time and date specified for opening, the solicitation number, and the name and address of the bidder. (b) If you are responding to more than one solicitation, each offer must be submitted in a different envelope or package. (c) Each Offeror must submit the number of copies indicated on the Cover Page.

(d) Offerors using commercial carrier services shall ensure that the Offer is addressed and marked on the outermost envelope or wrapper as prescribed in paragraphs (a)(1) and (2) of this provision when delivered to the office specified in the Solicitation. (e) Facsimile or e-mail offers, modifications, or withdrawals, will not be considered unless authorized by the Solicitation.

**TAX CREDIT FOR SUBCONTRACTING WITH MINORITY FIRMS:** Pursuant to Section 12-6-3350, taxpayers, who utilize certified minority subcontractors, may take a tax credit equal to 4% of the payments they make to said subcontractors. The payments claimed must be based on work performed directly for a District contract. The credit is capped at \$25,000 per year or the total tax liability; whichever is lesser.

The taxpayer is eligible to claim the credit for 6 consecutive taxable years beginning with the taxable year in which the credit is first claimed. There is no carry forward of unused credits. The credit may be claimed on Form TC-2, "Minority Business Credit." A copy of the subcontractor's certificate from the Governor's Office of Small and Minority Business (OSMBA) is to be attached to the contractor's income tax return. Taxpayers must maintain evidence of work performed for a District contract by the minority subcontractor. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803) 898-5786, Fax: (803) 898-5888. The subcontractor must be certified as to the criteria of a "Minority Firm" by the Governor's Office of Small and Minority Business Assistance (OSMBA).

Certificates are issued to subcontractors upon successful completion of the certification process. Questions regarding subcontractor certification are to be referred to: Governor's Office of Small and Minority Business Assistance, Phone: (803) 734-0657, Fax: (803) 734-2498.

**TAXPAYER IDENTIFICATION NUMBER:** (a) If Offeror is owned or controlled by a common parent as defined in paragraph (b) of this provision, Offeror shall submit with its Offer the name and TIN of common parent. (b) Definitions: "Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member. "Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number. (c) If Offeror does not have a TIN, Offeror shall indicate if either a TIN has been applied for or a TIN is not required. If a TIN is not required, indicate whether (i) Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States; (ii) Offeror is an agency or instrumentality of a state or local government; (iii) Offeror is an agency or instrumentality of a foreign government; or (iv) Offeror is an agency or instrumentality of the Federal Government.

**WITHDRAWAL OR CORRECTION OF OFFER:** Offers may be withdrawn by written notice received at any time before the exact time set for opening. If the Solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for opening. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid. The withdrawal and correction of Offers is governed by Article 5 – 1520 of the District's Procurement Code.

DISCLOSURE OF CONFLICTS OF INTEREST OR UNFAIR COMPETITIVE ADVANTAGE (MAY 2011): You warrant and represent that your offer identifies and explains any unfair competitive advantage you may have in competing for the proposed contract and any actual or potential conflicts of interest that may arise from your participation in this competition or your receipt of an award. The two underlying principles are (a) preventing the existence of conflicting roles that might bias a contractor’s judgment, and (b) preventing an unfair competitive advantage. If you have an unfair competitive advantage or a conflict of interest, the District may withhold award. Before withholding award on these grounds, an offeror will be notified of the concerns and provided a reasonable opportunity to respond. Efforts to avoid or mitigate such concerns, including restrictions on future activities, may be considered.

## **II. INSTRUCTIONS TO OFFERORS – B. SPECIAL INSTRUCTIONS**

**BID ONLY AS SPECIFIED.** Bid only as specified. Offeror shall bid product brands packaged and priced by the units of measure as specified and identified on the Pricing Schedule; otherwise, the bid will be rejected.

**OFFERING BY ITEM: Offerors must submit an offer for all services on the bidding schedule. Failure to offer on all items will be a reason for rejection.**

**PROTEST:** Any protest must be addressed to the Chief Procurement Officer, Lexington County School District One, and submitted in writing by e-mail or post delivery as follows:

Mailing Address: Lexington County School District One  
Procurement Services, Chief Procurement Officer  
100 Tarrar Springs Road  
Lexington, South Carolina 29072

Ref: Protest – BT2025.1  
Email: [jmiller@lexington1.net](mailto:jmiller@lexington1.net) and [mmonts@lexington1.net](mailto:mmonts@lexington1.net)

Subject Line: Protest - Ref: BT2025.1

## **III. SCOPE OF WORK / SPECIFICATIONS**

**SCOPE OF WORK:** See attached Scope of Work/Specifications.

**BIDDING SCHEDULE:** See Bidding Schedule

**DELIVERY DATE** – Delivery shall be within seven to ten (7-10) business days (or less) after contractor's receipt of a purchase order.

**DELIVERY LOCATION:** ~~Multiple school locations specified at time of Purchase Order~~

**Midway Elementary School**  
**180 Midway Rd, Lexington, SC 29072**

**Deerfield Elementary School**  
**638 Longs Pond Road, Lexington, S 29073**

**Meadow Glen Elementary School**  
**510 Ginny Lane, Lexington, SC 29072**

All deliveries shall be FOB Destination. All delivery charges are to be paid by the contractor and included in the price of the goods, not invoiced separately. Any claim for loss or damages shall be between the contractor and the carrier.

**QUALITY – NEW:** All items must be new.

**UNIT PRICES REQUIRED:** Unit prices shall be shown on each item.

#### **IV. INFORMATION FOR OFFERORS TO SUBMIT**

**INFORMATION FOR OFFERORS TO SUBMIT – GENERAL:** Offeror shall submit a signed Cover Page and Page Two. Offeror should submit all other information and documents requested in this part and in parts II.B. Special Instructions; III. Scope of Work; V. Qualifications; VIII. Bidding Schedule/Price Proposal; and any appropriate attachments addressed in section IX. Attachments to Solicitations.

**MINORITY PARTICIPATION:** Refer to Page Two of solicitation.

#### **V. QUALIFICATIONS**

**QUALIFICATION OF OFFEROR:** To be eligible for award of a contract, a prospective contractor must be responsible. In evaluating an Offeror's responsibility, the District Standards of Responsibility and information from any other source may be considered. An Offeror must, upon request of the District, furnish satisfactory evidence of its ability to meet all contractual requirements.

Unreasonable failure to supply information promptly in connection with a responsibility inquiry may be grounds for determining that you are ineligible to receive an award. [Article 5 – 1810 of the District's Procurement Code]  
**District Standards of Responsibility:** Factors to be considered in determining whether the District standards of responsibility have been met include whether a prospective contractor has:

- available the appropriate financial, material, equipment, facility, and personnel resources and expertise, or the ability to obtain them, necessary to indicate its capability to meet all contractual requirements;
- a satisfactory record of performance;
- a satisfactory record of integrity;
- qualified legally to contract with the District and State; and
- supplied all necessary information in connection with the inquiry concerning responsibility.

## **VI. AWARD CRITERIA**

~~AWARD BY ITEM: Award will be made by individual item.~~

AWARD CRITERIA – BIDS: Award will be made to the lowest responsible and responsive bidder.

AWARD TO ONE OFFEROR: Award will be made to one Offeror.

UNIT PRICE GOVERNS: In determining award, unit prices will govern over extended prices unless otherwise stated.

## **VII. TERMS AND CONDITIONS – A. GENERAL**

ASSIGNMENT, NOVATION, AND CHANGE OF NAME, IDENTITY, OR STRUCTURE (FEB 2015) (a) Contractor shall not assign this contract, or its rights, obligations, or any other interest arising from this contract, or delegate any of its performance obligations, without the express written consent of the responsible procurement officer. The foregoing restriction does not apply to a transfer that occurs by operation of law (e.g., bankruptcy; corporate reorganizations and consolidations, but not including partial asset sales). Notwithstanding the foregoing, contractor may assign monies receivable under the contract provided that the state shall have no obligation to make payment to an assignee until thirty days after contractor (not the assignee) has provided the responsible procurement officer with (i) proof of the assignment, (ii) the identity (by contract number) of the specific state contract to which the assignment applies, and (iii) the name of the assignee and the exact address or account information to which assigned payments should be made. (b) If contractor amends, modifies, or otherwise changes its name, its identity (including its trade name), or its corporate, partnership or other structure, or its FEIN, contractor shall provide the procurement officer prompt written notice of such change. (c) Any name change, transfer, assignment, or novation is subject to the review and approval of the Procurement Officer.

BANKRUPTCY: (a) Notice. In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish written notification of the bankruptcy to the District. This notification shall be furnished within five

(5) days of the initiation of the proceedings relating to the bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of all District contracts against which final payment has not been made. This obligation remains in effect until final payment under this Contract.

(b) Termination. This contract is voidable and subject to immediate termination by the District upon the contractor's insolvency, including the filing of proceedings in bankruptcy.

**CHOICE-OF-LAW:** The Agreement, any dispute, claim, or controversy relating to the Agreement, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules.

As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation.

**CONTRACT DOCUMENTS & ORDER OF PRECEDENCE:** (a) Any contract resulting from this solicitation shall consist of the following documents: (1) a Record of Negotiations, if any, executed by you and the Procurement Officer, (2) documentation regarding the clarification of an offer, if applicable, (3) the solicitation, as amended, (4) modifications, if any, to your offer, if accepted by the Procurement Officer, (5) your offer, (6) any statement reflecting the District's final acceptance (a/k/a "award"), and (7) purchase orders. These documents shall be read to be consistent and complimentary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. (b) The terms and conditions of documents (1) through (6) above shall apply notwithstanding any additional or different terms and conditions in either (i) a purchase order or other instrument submitted by the District or (ii) any invoice or other document submitted by Contractor. Except as otherwise allowed herein, the terms and conditions of all such documents shall be void and of no effect. (c) No contract, license, or other agreement containing contractual terms and conditions will be signed by the District. Any document signed or otherwise agreed to by persons other than the Procurement Officer shall be void and of no effect.

**DISCOUNT FOR PROMPT PAYMENT:**

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a discount for prompt payment in conjunction with the offer, offerors awarded contracts may include discounts for prompt payment on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the state annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

**DISPUTES:** (1) Choice-of-Forum. All disputes, claims, or controversies relating to the Agreement shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Lexington County School District One's Procurement Code, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Lexington County, State of South Carolina. Contractor agrees that any act by the District regarding the Agreement is not a waiver of either the District's sovereign immunity or the District's immunity under the Eleventh Amendment of the United States Constitution. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation.

(2) Service of Process. Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any disputes, claims, or controversies relating to the Agreement; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided as the Notice Address on Page Two or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail.

**EQUAL OPPORTUNITY:** Contractor is referred to and shall comply with all applicable provisions, if any, of Title 41, Part 60 of the Code of Federal Regulations, including but not limited to Sections 60-1.4, 60-4.2, 60-4.3, 60-250.5(a), and 60-741.5(a), which are hereby incorporated by reference.

**FALSE CLAIMS:** According to the S.C. Code of Laws § 16-13-240, "a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty" of a crime.

**FIXED PRICING REQUIRED:** Any pricing provided by contractor shall include all costs for performing the work associated with that price. Except as otherwise provided in this solicitation, contractor's price shall be fixed for the duration of this contract, including option terms. This clause does not prohibit contractor from offering lower pricing after award.

**NON-INDEMNIFICATION:** Any term or condition is void to the extent it requires the District to indemnify anyone.

**NOTICE:** (a) After award, any notices shall be in writing and shall be deemed duly given (1) upon actual delivery, if delivery is by hand, (2) upon receipt by the transmitting party of automated confirmation or answer back from the recipient's device if delivery is by telex, telegram, facsimile, or electronic mail, or (3) upon deposit into the United States mail, if postage is prepaid, a return receipt is requested, and either registered or certified mail is used. (b) Notice to contractor shall be to the address identified as the Notice Address on Page Two. Notice to the District shall be to the Procurement Officer's address on the Cover Page. Either party may designate a different address for notice by giving notice in accordance with this paragraph.

**OPEN TRADE:** During the contract term, including any renewals or extensions, Contractor will not engage in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300.

**PAYMENT & INTEREST:** (a) The District shall pay the Contractor, after the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified herein, including the purchase order, payment shall not be made on partial deliveries accepted by the District. (b) Unless otherwise provided herein, including the purchase order, payment will be made by check mailed to the payment address on "Page Two." (c) Notwithstanding any other provision, payment shall be made in accordance with the District's Procurement Code Section 45 which provides the Contractor's exclusive means of recovering any type of interest from the Owner. Contractor waives imposition of an interest penalty unless the invoice submitted specifies that the late penalty is applicable. Except as set forth in this paragraph, the District shall not be liable for the payment of interest on any debt or claim arising out of or related to this contract for any reason.

(d) Amounts due to the District shall bear interest at the rate of interest established by the South Carolina Comptroller General pursuant to Section 11-35-45 ("an amount not to exceed fifteen percent each year"), as amended. (e) Any other basis for interest, including but not limited to general (pre- and post-judgment) or specific interest statutes, including S.C. Code Ann. Section 34-31-20, are expressly waived by both parties. If a court, despite this agreement and waiver, requires that interest be paid on any debt by either party other than as provided by items (c) and (d) above, the parties further agree that the applicable interest rate for any given calendar year shall be the lowest prime rate as listed in the first edition of the Wall Street Journal published for each year, applied as simple interest without compounding. (f) The District shall have all of its common law, equitable and statutory rights of set-off.

**PUBLICITY:** Contractor shall not publish any comments or quotes by District employees, or include the District in either news releases or a published list of customers, without the prior written approval of the Procurement Officer.

**PURCHASE ORDERS:** Contractor shall not perform any work prior to the receipt of a purchase order from the District. The District shall order any supplies or services to be furnished under this contract by issuing a purchase order. Purchase orders may be used to elect any options available under this contract, e.g., quantity, item, delivery date, payment method, but are subject to all terms and conditions of this contract.

**SURVIVAL OF OBLIGATIONS:** The Parties' rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses: Indemnification - Third Party Claims, Intellectual Property Indemnification, and any provisions regarding warranty or audit.

**TAXES:** Any tax the contractor may be required to collect or pay upon the sale, use or delivery of the products shall be paid by the District, and such sums shall be due and payable to the contractor upon acceptance. Any personal property taxes levied after delivery shall be paid by the District.

It shall be solely the District's obligation, after payment to contractor, to challenge the applicability of any tax by negotiation with, or action against, the taxing authority. Contractor agrees to refund any tax collected, which is subsequently determined not to be proper and for which a refund has been paid to contractor by the taxing authority. In the event that the contractor fails to pay, or delays in paying, to any taxing authorities, sums paid by the District to contractor, contractor shall be liable to the District for any loss (such as the assessment of additional interest) caused by virtue of this failure or delay. Taxes based on Contractor's net income or assets shall be the sole responsibility of the contractor.

**TERMINATION DUE TO UNAVAILABILITY OF FUNDS:** Payment and performance obligations for succeeding fiscal periods shall be subject to the availability and appropriation of funds therefor. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period, the contract shall be canceled. In the event of a cancellation pursuant to this paragraph, contractor will be reimbursed the resulting unamortized, reasonably incurred, nonrecurring costs. Contractor will not be reimbursed any costs amortized beyond the initial contract term.

**THIRD PARTY BENEFICIARY:** This Contract is made solely and specifically among and for the benefit of the parties hereto, and their respective successors and assigns, and no other person will have any rights, interest, or claims hereunder or be entitled to any benefits under or on account of this Contract as a third party beneficiary or otherwise.

**WAIVER:** The District does not waive any prior or subsequent breach of the terms of the Contract by making payments on the Contract, by failing to terminate the Contract for lack of performance, or by failing to strictly or promptly insist upon any term of the Contract. Only the Procurement Officer has actual authority to waive any of the District's rights under this Contract. Any waiver must be in writing.

**ILLEGAL IMMIGRATION:** (An overview is available at <https://procurement.sc.gov/immigration>)  
By signing your offer, you certify that you will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agree to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable to you and your subcontractors or sub-subcontractors; or (b) that you and your subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony, and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." You agree to include in any contracts with your subcontractors language requiring your subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. [07-7B097-1]

## **VII. TERMS AND CONDITIONS – B. SPECIAL**

### **CHANGES:**

(1) Contract Modification. By a written order, at any time, and without notice to any surety, the Procurement Officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:

- (a) drawings, designs, or specifications, if the supplies to be furnished are to be specially manufactured for the [District] in accordance therewith;
- (b) method of shipment or packing;
- (c) place of delivery;
- (d) description of services to be performed;
- (e) time of performance (i.e., hours of the day, days of the week, etc.); or,
- (f) place of performance of the services.

Subparagraphs (a) to (c) apply only if supplies are furnished under this contract. Subparagraphs (d) to (f) apply only if services are performed under this contract.

(2) Adjustments of Price or Time for Performance. If any such change increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, an adjustment shall be made in the contract price, the delivery schedule, or both, and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the Price Adjustment Clause of this contract. Failure of the parties to agree to an adjustment shall not excuse the contractor from proceeding with the contract as changed, provided that the District promptly and duly make such provisional adjustments in payment or time for performance as may be reasonable. By proceeding with the work, the contractor shall not be deemed to have prejudiced any claim for additional compensation, or an extension of time for completion.

(3) Time Period for Claim. Within 30 days after receipt of a written contract modification under Paragraph (1) of this clause, unless such period is extended by the Procurement Officer in writing, the contractor shall file notice of intent to assert a claim for an adjustment. Later notification shall not bar the contractor's claim unless the District is prejudiced by the delay in notification.

(4) Claim Barred After Final Payment. No claim by the contractor for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this contract.

**COMPLIANCE WITH LAWS:** During the term of the contract, contractor shall comply with all applicable provisions of laws, codes, ordinances, rules, regulations, and tariffs.

### **CONTRACTOR'S LIABILITY INSURANCE – GENERAL:**

(a) Without limiting any of the obligations or liabilities of Contractor, Contractor shall procure from a company or companies lawfully authorized to do business in South Carolina and with a current A.M. Best rating of no less than A: VII, and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work and the results of that work by the contractor, his agents, representatives, employees or subcontractors.

(b) Coverage shall be at least as broad as:

(1) Commercial General Liability (CGL): Insurance Services Office (ISO) Form CG 00 01 12 07 covering CGL on an “occurrence” basis, including products-completed operations, personal and advertising injury, with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, the general aggregate limit shall be twice the required occurrence limit. This contract shall be considered to be an “insured contract” as defined in the policy.

(2) Auto Liability: ISO Form Number CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limits no less than \$1,000,000 per accident for bodily injury and property damage.

(3) Worker’s Compensation: As required by the State of South Carolina, with Statutory Limits, and Employer’s Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.

(c) The District and the officers, officials, employees and volunteers of any of them, must be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor’s insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used.

(d) For any claims related to this contract, the Contractor’s insurance coverage shall be primary insurance as respects the District, and the officers, officials, employees and volunteers of any of them. Any insurance or self-insurance maintained by the District or the officers, officials, employees and volunteers of any of them, shall be excess of the Contractor’s insurance and shall not contribute with it.

(e) Prior to commencement of the work, the Contractor shall furnish the District with original certificates and amendatory endorsements or copies of the applicable policy language affecting coverage required by this section. All certificates are to be received and approved by the District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor’s obligation to provide them. The District reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by this section, at any time.

f) Should any of the above described policies be canceled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

In addition, the Contractor shall notify the District immediately upon receiving any information that any of the coverages required by this section are or will be changed, canceled, or replaced.

(g) Contractor hereby grants to the District a waiver of any right to subrogation which any insurer of said Contractor may acquire against the District by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the District has received a waiver of subrogation endorsement from the insurer.

(h) Any deductibles or self-insured retentions must be declared to and approved by the District. The District may require the Contractor to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

(i) The District reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

**CONTRACTOR'S OBLIGATION – GENERAL:** The contractor shall provide and pay for all materials, tools, equipment, labor and professional and non-professional services, and shall perform all other acts and supply all other things necessary, to fully and properly perform and complete the work. The contractor must act as the prime contractor and assume full responsibility for any subcontractor's performance. The contractor will be considered the sole point of contact with regard to all situations, including payment of all charges and the meeting of all other requirements.

**DEFAULT:**

(a)(1) The District may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to-

- (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;
- (ii) Make progress, so as to endanger performance of this contract (but see paragraph (a)(2) of this clause); or
- (iii) Perform any of the other material provisions of this contract (but see paragraph (a)(2) of this clause).

(2) The District's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Procurement Officer) after receipt of the notice from the Procurement Officer specifying the failure.

(b) If the District terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Procurement Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the District for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.

(c) Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (1) acts of God or of the public enemy,

(2) acts of the District in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

(d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.

(e) If this contract is terminated for default, the District may require the Contractor to transfer title and deliver to the District, as directed by the Procurement Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Procurement Officer, the Contractor shall also protect and preserve property in its possession in which the District has an interest.

(f) The District shall pay contract price for completed supplies delivered and accepted. The Contractor and Procurement Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property; if the parties fail to agree, the Procurement Officer shall set an amount subject to the Contractor's rights under the Disputes clause. Failure to agree will be a dispute under the Disputes clause. The District may withhold from these amounts any sum the Procurement Officer determines to be necessary to protect the District against loss because of outstanding liens or claims of former lien holders.

(g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the District, be the same as if the termination had been issued for the convenience of the District.

If, in the foregoing circumstances, this contract does not contain a clause providing for termination for convenience of the District, the contract shall be adjusted to compensate for such termination and the contract modified accordingly subject to the contractor's rights under the Disputes clause.

(h) The rights and remedies of the District in this clause are in addition to any other rights and remedies provided by law or under this contract.

**LICENSES AND PERMITS:** During the term of the contract, the Contractor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections and related fees for each or any such licenses, permits and /or inspections required by the District, county, city or other government entity or unit to accomplish the work specified in this solicitation and the contract.

**MATERIAL AND WORKMANSHIP:** Unless otherwise specifically provided in this contract, all equipment, material, and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended.

**ESTIMATED QUANTITY – UNKNOWN:** The total quantity of purchases of any individual item on the contract is not known. The District does not guarantee that the District will buy any specified item or total amount. The omission of an estimated purchase quantity does not indicate a lack of need but rather a lack of historical information.

**INDEMNIFICATION – THIRD PARTY CLAIMS:** Notwithstanding any limitation in this agreement, and to the fullest extent permitted by law, Contractor shall defend and hold harmless Indemnitees for and against any and all suits or claims of any character (and all related damages, settlement payments, attorneys' fees, costs, expenses, losses or liabilities) by a third party which are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property arising out of or in connection with the goods or services acquired hereunder or caused in whole or in part by any act or omission of contractor, its subcontractors, their employees, workmen, servants, agents, or anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by an Indemnitee, and whether or not such claims are made by a third party or an Indemnitee; however, if an Indemnitee's negligent act or omission is subsequently determined to be the sole proximate cause of a suit or claim, the Indemnitee shall not be entitled to indemnification hereunder. Contractor shall be given timely written notice of any suit or claim.

Contractor's obligations hereunder are in no way limited by any protection afforded under workers compensation acts, disability benefits acts, or other employee benefit acts. This clause shall not negate, abridge, or reduce any other rights or obligations of indemnity which would otherwise exist. The obligations of this paragraph shall survive termination, cancelation, or expiration of the parties' agreement. This provision shall be construed fairly and reasonably, neither strongly for nor against either party, and without regard to any clause regarding insurance. As used in this clause, Indemnitees means the State of South Carolina, its instrumentalities, agencies, departments, boards, political subdivisions and all their respective officers, agents and employees.

**PRICE ADJUSTMENTS:** (1) Method of Adjustment. Any adjustment in the contract price made pursuant to a clause in this contract shall be consistent with this Contract and shall be arrived at through whichever one of the following ways is the most valid approximation of the actual cost to the Contractor (including profit, if otherwise allowed):

(a) by agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

- (b) by unit prices specified in the Contract or subsequently agreed upon;
  - (c) by the costs attributable to the event or situation covered by the relevant clause, including profit if otherwise allowed, all as specified in the Contract; or subsequently agreed upon;
  - (d) in such other manner as the parties may mutually agree; or,
  - (e) in the absence of agreement by the parties, through a unilateral initial written determination by the Procurement Officer of the costs attributable to the event or situation covered by the clause, including profit if otherwise allowed, all as computed by the Procurement Officer in accordance with generally accepted accounting principles, subject to the provisions of Article 17 of the District's Procurement Code.
- (2) Submission of Price or Cost Data. Upon request of the Procurement Officer, the contractor shall provide reasonably available factual information to substantiate that the price or cost offered, for any price adjustments is reasonable, consistent with the provisions of Section 1830 of the District's Procurement Code.

**PRICE ADJUSTMENT - LIMITED - AFTER INITIAL TERM ONLY:** Upon approval of the Procurement Officer, prices may be adjusted for any renewal term. Prices shall not be increased during the initial term. Any request for a price increase must be received by the Procurement Officer at least ninety (90) days prior to the expiration of the applicable term and must be accompanied by sufficient documentation to justify the increase. If approved, a price increase becomes effective starting with the term beginning after approval. A price increase must be executed as a change order. Contractor may terminate this contract at the end of the then current term if a price increase request is denied.

Notice of termination pursuant to this paragraph must be received by the Procurement Officer no later than fifteen (15) days after the Procurement Officer sends contractor notice rejecting the requested price increase.

**PRICE ADJUSTMENTS – LIMITED BY CPI “Other Goods & Services”:** Upon request and adequate justification, the Procurement Officer may grant a price increase up to, but not to exceed, the unadjusted percent change for the most recent 12 months for which data is available, that is not subject to revision, in the Consumer Price Index (CPI) for all urban consumers (CPI-U), “Other Goods & Services” for services, as determined by the Procurement Officer. The Bureau of Labor and Statistics publishes this information on the web at [www.bls.gov](http://www.bls.gov).

**SHIPPING / RISK OF LOSS:** F.O.B. Destination. Destination is the delivery location, or other location, as specified herein. (See Delivery Location provisions)

**WARRANTY – STANDARD:** Contractor must provide the manufacturer's standard written warranty upon delivery of product. Contractor warrants that the manufacturer will honor the standard written warranty provided.

**STORAGE OF MATERIALS:** Absent approval of the District, Contractor shall not store items on the premises of the District prior to the time set for installation.

**PREFERENCES - RESIDENT CONTRACTOR PREFERENCE:** To qualify for the Resident Contractor Preference, you must maintain an office in this state. An office is a non-mobile place for the regular transaction of business or performance of a particular service which has been operated as such by the bidder for at least one year before the bid opening and during that year the place has been staffed for at least fifty weeks by at least two employees for at least thirty five hours a week each. In addition, you must, at the time you submit your bid, directly employ, or have a documented commitment with, individuals domiciled in South Carolina that will perform services expressly required by the solicitation and your total direct labor cost for those individuals to provide those services must exceed fifty percent of your total bid price. [11-35-1524(C)(1)(iii)] Upon request by the procurement officer, you must identify the persons domiciled in South Carolina that will perform the services involved in the procurement upon which you rely in qualifying for the preference, the services those individuals are to perform, and documentation of the your labor cost for each person identified. If requested, your failure to provide this information promptly will be grounds to deny the preference (and, potentially, for other enforcement action).

**PREFERENCES - RESIDENT VENDOR PREFERENCE:** To qualify for the Resident Vendor Preference, you must maintain an office in this state. An office is a non-mobile place for the regular transaction of business or performance of a particular service which has been operated as such by the bidder for at least one year before the bid opening and during that year the place has been staffed for at least fifty weeks by at least two employees for at least thirty five hours a week each. In addition, you must either: (1) maintain at a location in South Carolina at the time of the bid an inventory of expendable items which are representative of the general type of commodities for which the award will be made and which have a minimum total value, based on the bid price, equal to the lesser of fifty thousand dollars [\$50,000] or the annual amount of the contract; or (2) be a manufacturer headquartered and having an annual payroll of at least one million dollars in South Carolina and the end product being sold is either made or processed from raw materials into a finished end product by that manufacturer or its affiliate (as defined in Section 1563 of the Internal Revenue Code).

**SUBSTITUTIONS PROHIBITED - END PRODUCT PREFERENCES:** If you receive the award as a result of the South Carolina end product or United States end product preference, you may not substitute a non-qualifying end product for a qualified end product. If you violate this provision, the State may terminate your contract for cause and you may be debarred. In addition, you shall pay to the State an amount equal to twice the difference between the price paid by the State and your evaluated price for the item for which you delivered a substitute.

**SUBCONTRACTOR SUBSTITUTION PROHIBITED - RESIDENT SUBCONTRACTOR PREFERENCE:** If you receive an award as a result of the subcontractor preference, you may not substitute any business for the subcontractor upon which you relied to qualify for the preference, unless first approved in writing by the procurement officer. If you violate this provision, the District may terminate your contract for cause and you may be debarred. In addition, the procurement officer may require you to pay the District an amount equal to twice the difference between the price paid by the District and the price offered by the next lowest bidder, unless the substituted subcontractor qualifies for the preference.

**TERM OF CONTRACT – OPTION TO RENEW:** At the end of the initial term, and at the end of each renewal term, this contract shall automatically renew for a period of 1 year, unless contractor receives notice that the District elects not to renew the contract at least thirty (30) days prior to the date of renewal. Regardless, this contract expires no later than the last date stated on the final statement of award.

~~TERM OF CONTRACT – TERMINATION BY CONTRACTOR: Contractor may terminate this contract at the end of the initial term, or any renewal term, by providing the Procurement Officer notice of its election to terminate under this clause at least ninety (90) days prior to the expiration of the then current term.~~

~~TERMINATION FOR CONVENIENCE – INDEFINITE DELIVERY / INDEFINITE QUANTITY CONTRACTS: Unless the termination so provides, a termination for convenience shall not operate to terminate any purchase orders issued prior to the effective date of termination.~~

TERMINATION FOR CONVENIENCE: (1) Termination. The Procurement Officer may terminate this contract in whole or in part, for the convenience of the District. The Procurement Officer shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective.

(2) Contractor's Obligations. The contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. The Procurement Officer may direct the contractor to assign the contractor's right, title, and interest under terminated orders or subcontracts to the District. The contractor must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

(3) Right to Supplies. The Procurement Officer may require the contractor to transfer title and deliver to the District in the manner and to the extent directed by the Procurement Officer: (a) any completed supplies; and (b) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.

The contractor shall, upon direction of the Procurement Officer, protect and preserve property in the possession of the contractor in which the District has an interest. If the Procurement Officer does not exercise this right, the contractor shall use best efforts to sell such supplies and manufacturing materials in accordance with the standards of Uniform Commercial Code Section 2-706. Utilization of this Section in no way implies that the District has breached the contract by exercise of the Termination for Convenience Clause.

(4) Compensation. (a) The contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data required by 1830 bearing on such claim. If the contractor fails to file a termination claim within one year from the effective date of termination, the Procurement Officer may pay the contractor, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.

(b) The Procurement Officer and the contractor may agree to a settlement and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the District, the proceeds of any sales of supplies and manufacturing materials under Paragraph (3) of this clause, and the contract price of the work not terminated;

(c) Absent complete agreement under Subparagraph (b) of this Paragraph, the Procurement Officer shall pay the contractor the following amounts, provided payments agreed to under Subparagraph (b) shall not duplicate payments under this Subparagraph:

(i) contract prices for supplies or services accepted under the contract;

(ii) costs reasonably incurred in performing the terminated portion of the work less amounts paid or to be paid for accepted supplies or services;

(iii) reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Paragraph (2) of this clause. These costs must not include costs paid in accordance with Subparagraph (c)(ii) of this paragraph;

(iv) any other reasonable costs that have resulted from the termination. The total sum to be paid the contractor under this Subparagraph shall not exceed the total contract price plus the reasonable settlement costs of the contractor reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.

(d) Contractor must demonstrate any costs claimed, agreed to, or established under Subparagraphs (b) and (c) of this Paragraph using its standard record keeping system, provided such system is consistent with any applicable Generally Accepted Accounting Principles.

(5) Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not (i) affect the District's right to require the termination of a subcontract, or (ii) increase the obligation of the District beyond what it would have been if the subcontract had contained an appropriate clause.

**DISTRICT SITE ACCESS:** Contractor's personnel must wear an identification badge as approved by the District and shall utilize the procedures authorized by the District to obtain access to District buildings. The District requires Contractor's personnel to enter through the front office. Push the button at the main doors, wait for a response, and follow instructions.

District sites have a comprehensive visitor check-in and check-out software system located at the front desk. This system runs a background check on each visitor every time he or she visits. Each visitor must check in and out when in a school or on school grounds, regardless of the time of day. Should the system flag an individual for *any* reason, the system will automatically and privately alert the front office staff and the school's administrators. Those administrators will then talk to the individual and work through any issue.

**TOBACCO FREE ENVIRONMENT:** The District provides a smoke and tobacco free environment for its staff, students and the general public. No tobacco products are permitted in any building or on the grounds of any District building.

**CONTRACTOR'S CARE:** Contractor shall exercise due care in protecting all property and surrounding property. Contractor will be responsible for any damage and will be required to restore any damage. If the contractor fails or refuses to repair any damage promptly, the District may have the necessary work performed and charge the pricing thereof to the contractor.

**VIII. BIDDING SCHEDULE / PRICE-BUSINESS PROPOSAL**

See the Procurement Code, Section 11-35-1524 and Section II(B) of this solicitation for more information.

~~ESTIMATED QUANTITY — UNKNOWN: The total quantity of purchases of any individual item on the contract is not known. The District does not guarantee that the District will buy any specified item or total amount.~~

~~VOLUME: The District does not guarantee any volume or dollar amount from this contract. The District does not obligate itself to purchase any particular quantity or item but the price offered must be firm regardless if the quantity increases or decreases. Quantities below are ESTIMATED ANNUAL USAGE.~~

All deliveries shall be FOB Destination. All delivery charges are to be paid by the contractor and included in the price of the goods, not invoiced separately. Any claim for loss or damages shall be between the contractor and the carrier.

**\*\* Do not add terms and conditions to your offer \*\***

\* Are you requesting the SC Resident Vendor Preference? See the Procurement Code, Section 11-35-1524(C)(1)(iii) and Section II(B) of this Solicitation for more information.  YES  NO

\* Are you requesting the SC Resident Contractor Preference? See the Procurement Code, Section 11-35-1524(C)(1)(iii) and Section II(B) of this Solicitation for more information.  YES  NO

\* Are you requesting the SC End-Product Preference? See the Procurement Code, Section 11-35-1524(B)(1) and Section II(B) of this solicitation for more information.  YES  NO

\* Are you requesting the US End-Product Preference? See the Procurement Code, Section 11-35-1524(B)(2) and Section II(B) of this solicitation for more information.  YES  NO

*Note: The commodity preferences do not apply to a bid for an item of work by the bidder if the annual price of the bidder's work exceeds \$50,000 or the total potential price of the bidder's work exceeds \$500,000 [11-35-1524(E)(3)].*

**~~BIDDING SCHEDULE / PRICE-BUSINESS PROPOSAL~~**

| <b>Line Number</b> | <b>Quantity</b> | <b>Unit of Measure</b> | <b>Unit Price</b> | <b>Extended Price</b> |
|--------------------|-----------------|------------------------|-------------------|-----------------------|
| <b>-0004</b>       | <b>350,803</b>  | <b>Page</b>            |                   |                       |

~~**Item Description:** Coiled Bound Workbooks printed in languages per the chart below and delivered to specified locations per section IX. Scope of Work/Specifications~~

| <b>Line Number</b> | <b>Quantity</b> | <b>Unit of Measure</b> | <b>Unit Price</b> | <b>Extended Price</b> |
|--------------------|-----------------|------------------------|-------------------|-----------------------|
| <b>-0002</b>       | <b>350,803</b>  | <b>Page</b>            |                   |                       |

~~**Item Description:** 3 Hole Punched loose pages printed in languages per the chart below and delivered to specified locations per section IX. Scope of Work/Specifications~~

**Add Line 1 & 2 for Total BID Price**

\$

~~Chart below provided for bidding purposes only  
District reserves the right to increase or decrease the amount as necessary~~

| <del>German</del>  | <del>Mandarin</del> | <del>French</del>  | <del>Total</del>   |
|--------------------|---------------------|--------------------|--------------------|
| <del>46,762</del>  | <del>20,120</del>   | <del>25,700</del>  | <del>62,582</del>  |
| <del>42,936</del>  | <del>18,693</del>   | <del>26,680</del>  | <del>58,309</del>  |
| <del>44,850</del>  | <del>42,138</del>   | <del>24,940</del>  | <del>51,928</del>  |
| <del>40,146</del>  | <del>21,645</del>   | <del>45,680</del>  | <del>47,474</del>  |
| <del>54,694</del>  | <del>20,944</del>   | <del>49,476</del>  | <del>95,114</del>  |
|                    | <del>16,770</del>   | <del>18,632</del>  | <del>35,402</del>  |
| <del>109,385</del> | <del>110,310</del>  | <del>131,108</del> | <del>350,803</del> |

**BIDDING SCHEDULE/PRICE BUSINESS PROPOSAL**

| Line Number  | Quantity | Unit of Measure | Unit Price | Extended Price |
|--|----------|-----------------|------------|----------------|
| <b>0001</b>  | 1        | LOT             |            |                |
| <b>Item Description:</b> Furnish and deliver immersion workbooks complying with all specifications listed herein |          |                 |            |                |

## **IX. Scope of Work/Specifications**

Furnish and deliver immersion workbooks for grades listed beside each language below. Workbooks will be submitted in PDF format only. The PDF files are linked within the linked [spreadsheet](#). Workbooks should be an exact match to coloring and fonts as shown in the linked pdf file. Any variation can alter the meaning of the questions/answers in the workbooks. The total number of workbooks are shown by language in grade level in the spreadsheet.

### **Specs for German (Grades 2-5) and Mandarin Chinese (Grades K-5):**

- 8.5 x 11 sheets of regular copy paper thickness
- Paper color: white
- Each book needs to be coiled bound with a protective cover. For example: plastic front cover with a thicker grade of paper for the 1st page and a durable black back cover.
- Printing – front and back
- Non-bleed

### **Specs for French (Grades K-5):**

- 8.5 x 11 sheets of regular copy paper thickness
- Paper color: white
- Loose-leaf (Not-bound)
- 3-hole punched
- Printing – front and back
- Non-bleed

**After receiving an approved purchase order, the vendor will print a proof of ONE EACH workbook in EACH language to send to the District for approval within 5 business days. The District will review the proof for accuracy of colors, fonts, etc. before the vendor proceeds to print the remaining workbooks. After the vendor receives approval of the proof from the District, the District will email the vendor to give approval to proceed with printing the remaining workbooks. If the proof of EACH workbook in EACH language is not approved, the vendor has 1 business day to submit a correct proof to the District. If the proof does not match the specifications a second time, the District has the right to proceed with the next lowest offeror.**

~~Workbooks will be provided to the vendor in PDF format only. by June 30th of each year of the contract. The PDF files will be submitted via a linked spreadsheet with workbooks in full file and detailing the number of workbooks per Grades and number of pages per workbook. Workbooks must be an exact match to coloring and fonts as shown in the linked pdf file. Any variation can alter the meaning of the questions/answers in the workbooks.~~

### **Coiled Workbook Specifications**

- ~~● 8.5 x 11 sheets of regular copy paper thickness~~

- ~~Paper color: white~~
- ~~Each book needs to be coiled with a protective cover. For example: plastic front cover with a thicker grade of paper for the 1st page and a durable black back cover.~~
- ~~Printing — front and back~~
- ~~Non-bleed~~

**3 Hole Punched Specifications:**

- ~~8.5 x 11 sheets of regular copy paper thickness~~
- ~~Paper color: white~~
- ~~Loose leaf (Not bound)~~
- ~~3 hole punched~~
- ~~Printing — front and back~~
- ~~Non-bleed~~

**Samples for Evaluation for Award:**

The District will require a printed sample of 60 pages provided in the attachment(s) found in **Section X**. This Sample shall accompany the solicitation upon submittal. This sample will be free of charge and used for evaluation purposes as a determining factor for Award. Samples should comply with all printing specifications listed above. Sample evaluations will be on a one time basis. No corrections will be allowed.

**After Award:**

Purchase Order to be processed once Award is final. One of each workbook samples will be sent to the District for approval. Ideally, all workbooks shall be delivered August 6<sup>th</sup>, 2024, to the specified locations provided by Purchase Order. If not possible due to time restraints Volume 1 to be delivered by August 6<sup>th</sup> and Volume 2 to be delivered by September 6<sup>th</sup>.

**Procedure for renewal years:**

~~Workbooks will be submitted to the vendor in PDF format only by June 30th of each year of the contract. The PDF files will be submitted via a linked spreadsheet detailing the number of workbooks per Grades and number of pages per workbook. After receiving an approved purchase order, the vendor will print a proof of ONE EACH workbook in EACH language to send to the District for approval within 5 business days. The District will review the proof for accuracy of colors, fonts, etc. before the vendor proceeds to print the remaining workbooks. After the vendor receives approval of the proof from the District, the District will email the vendor to give approval to proceed with printing the remaining workbooks. If the proof of EACH~~

~~workbook in EACH language is not approved, the vendor has 1 business day to submit a correct proof to the District. If the proof does not match the specifications a second time, the District has the right to proceed with the next lowest offeror.~~

**Yearly Schedule of Order and Delivery:**

~~2024: Purchase Order processed once Award is final. One of each workbook samples will be sent to the District for approval. Ideally, all workbooks shall be delivered August 6<sup>th</sup>, 2024, to the specified locations provided by Purchase Order. If not possible due to time restraints Volume 1 to be delivered by August 6<sup>th</sup> and Volume 2 to be delivered by September 6<sup>th</sup>.~~

~~2025: PDF File to vendor June 30, 2025  
Purchase Order processed July 1<sup>st</sup>, 2025  
Delivery date TBD~~

~~2026: PDF File to vendor June 30, 2026  
Purchase Order processed July 1<sup>st</sup>, 2026  
Delivery date TBD~~

~~2027: PDF File to vendor June 30, 2027  
Purchase Order processed July 1<sup>st</sup>, 2027  
Delivery date TBD~~

~~2028: PDF File to vendor June 30, 2028  
Purchase Order processed July 1<sup>st</sup>, 2028  
Delivery date TBD~~

**X. Attachments**

**Attachment One - All Workbook Pages**

**Attachment Two - Pages for Sample Printing**



**Ready<sup>®</sup> Classroom**  
**Mathematics**

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**Grade 4 • Volume 2**

# 第4单元

fēn shù xiǎo  
分数、小  
shù cè liáng  
数、测量

jiā fǎ jiǎn fǎ  
加法、减法、  
chéng fǎ  
乘法

## 自我检查

zài xué xī zhè gè dān yuán qián, zài xià miàn nǐ zhī dào de jì néng qián dǎ gōu。 zài nǐ xué wán měi jié kè zhī hòu, kàn kàn nǐ yòu néng duō dǎ jǐ gè gōu。

我可以...

学之前

学之后

bǐ jiào liǎng gè fēn mǔ bù tóng de fēn shù。  
比较两个分母不同的分数。



jiā jiǎn fēn shù hé hùn hé shù zì。  
加减分数和混合数字。



jiā jiǎn xiàn tú shàng de fēn shù。  
加减线图上的分数。



zuò fēn shù chéng yǐ zhěng shù。  
做分数乘以整数。



bǎ xiǎo shù xiě chéng fēn shù, bǎ fēn shù xiě chéng xiǎo shù。  
把小数写成分数，把分数写成小数。



bǐ jiào xiǎo shù de dà xiǎo。  
比较小数的大小。

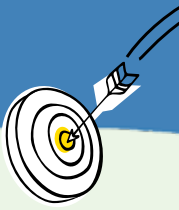


zuò shí jiān hé qián de wèn tí。  
做时间和钱的问题。



zuò cháng dù, yè tǐ tǐ jī, zhì liáng, zhòng liáng de wèn tí。  
做长度、液体体积、质量、重量的问题。

# 探索等分数



dāng fēn shù xiāng děng dì shí hòu huì  
当分数相等的时候会  
fā shēng shí me  
发生什么?



## Learning Target

- Explain why a fraction  $\frac{a}{b}$  is equivalent to a fraction  $\frac{(n \times a)}{(n \times b)}$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

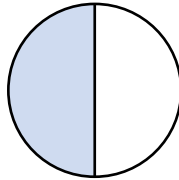
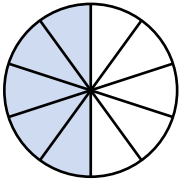
SMP 1, 2, 3, 4, 5, 6, 7

### 学一学

wán chéng xià miàn de wèn tí hé fàn lì  
完成下面的问题和范例。

1 kàn xià miàn de fēn shù  
看下面的分数。

a. xiě chū xià miàn tú sè bù fēn de fēn shù  
a. 写出下面涂色部分的分数。



b. zhè liǎng gè fēn shù nǎ lǐ yí yàng?  
b. 这两个分数哪里一样?

zhè liǎng gè fēn shù nǎ lǐ bù yí yàng wéi shí me?  
这两个分数哪里不一样?为什么?

2 dēng fēn shù shì quán bù lǐ yí yàng dà de bù fēn  
等分数是全部里一样大的部分。把下面的长方形模块涂色

biǎo shì děng yú  $\frac{1}{2}$  rán hòu xiě chū fēn shù  
表示等于  $\frac{1}{2}$  然后写出分数。



a. .....

b. .....



### 说一说

wèn tí 2 de dēng fēn shù de cháng fāng xíng nǎ lǐ yí yàng nǎ lǐ bù yí yàng?  
问题2的等分数的长方形哪里一样?哪里不一样?

wǒ xiǎng dēng fēn shù yòng bù tóng de fāng fǎ zhǎn shì le yí yàng dà de shù zì yīn wéi...  
我想等分数用不同的方法展示了一样大的数字, 因为...

# děng fēn shù dì zhǔn bèi 等分数的准备

1 xiǎng yī xiǎng nǐ zhī dào dēng fēn shù shì shí me xiě zài měi ge gé zǐ lǐ  
想一想你知道等分数是什么，写在每个格子里。  
yòng zhōng wén shù zì huà tú huà lái zhǎn shì suǒ yǒu nǐ zhī dào de dōng xī  
用中文、数字、画图画来展示所有你知道的东西。

shì shí me  
是什么?

wǒ zhī dào shí me  
我知道什么?

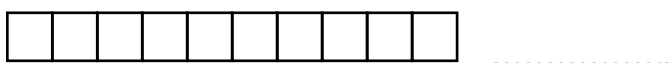
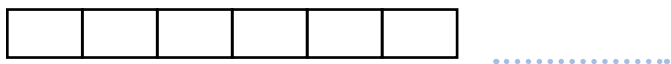
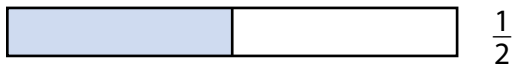


lì zǐ  
例子

lì zǐ  
例子

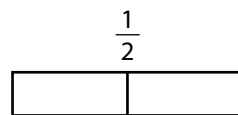
lì zǐ  
例子

2 tú sè lái huà chū  $\frac{1}{2}$  de dēng fēn shù rán hòu xiě chū fēn shù  
涂色来画出  $\frac{1}{2}$  的等分数，然后写出分数。

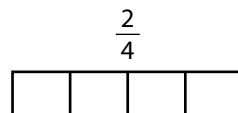


3 把长方形模块涂色展示上面的分数。

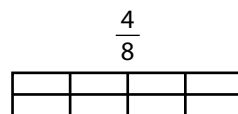
a. 你涂色的部分一样大吗?



b. 你怎么知道  $\frac{1}{2}$ ,  $\frac{2}{4}$  和  $\frac{4}{8}$  是等分数?



c. 比较长方形。相等部分的个数和涂色部分的个数是它上面的长方形的几倍?



4 你也可以把分子、分母乘以一样的数字来算出等分数。

a. 写出正方形里的数字。

b.  $\frac{2}{4}$  的分子分母是  $\frac{1}{2}$  的分子分母的几倍?

$$\frac{1 \times \square}{2 \times \square} = \frac{2}{4}$$

c. 用这个方法找出另一个  $\frac{1}{2}$  的等分数。

$$\frac{1 \times 4}{2 \times \square} = \frac{\square}{\square}$$

# 发展 理解等分数

## 学一学: AREA MODELS

试一试这两个问题。

1 用右边的长方形模块。

a. 涂色来展示  $\frac{1}{4}$ 。



b. 把长方形分成8个等份。然后写出等分数。

c. 在这个等分数里，你怎么比较等份的个数和大小？

2 画出长方形的  $\frac{2}{5}$ 。把长方形分成

不同数字的等份来展示一个新的等分数。



a. 这个等分数是什么？

b. 它的分子分母是  $\frac{2}{5}$  的分子分母的几倍？



### 说一说

- 比较问题 2里你的长方形和你的小伙伴的长方形。它们哪里一样？哪里不一样？
- 我想面积法可以帮我理解分数，因为...

学一学 等式

用等式来帮助你理解等式。

3 用这个乘法算出  $\frac{5}{6}$  的等分数。

$$\frac{5 \times 2}{6 \times \square} = \frac{10}{\square}$$

4 a. 用这个乘法算出  $\frac{4}{6}$  的等分数。

$$\frac{4 \times \square}{6 \times \square} = \frac{8}{\square}$$

b. 如果你把  $\frac{4}{6}$  里的分子、分母都除以2会得到什么?

5 要算出  $\frac{6}{8}$  的等分数, Beth把分母除以2得到4。

Beth怎么算出等分数的分子? 这个等分数是什么?

说一说

看问题4a和5, 你怎么知道乘以/除以那个数字呢?

我想乘法和除法等式可以帮我理解等分数, 因为...

想一想

完成下面的问题。

6 你怎么用长方形和等式来算出等分数?

7 用长方形/模型来找出两个  $\frac{2}{6}$  的等分数。

# liàn xí dēng fēn shù 练习等分数

kàn lì zǐ xué dēng fēn shù, rán hòu zuò wèn tí 1-8.  
看例子学等分数，然后做问题1-8。

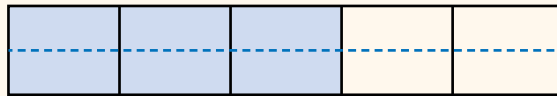
## lì zǐ 例子

cháng fāng xíng mó kuài kě yǐ zhǎn shì dēng fēn shù.  
长方形模块可以展示等分数。

zhè gè cháng fāng xíng yǒu 5 dì dēng fēn. tā zhǎn shì le  $3\frac{3}{5}$ .  
这个长方形有5的等份。它展示了  $3\frac{3}{5}$ 。



bǎ cháng fāng xíng fēn chéng 10 gè dēng fēn lái zhǎn shì yí gè dēng fēn shù.  
把长方形分成10个等份来展示一个等分数。

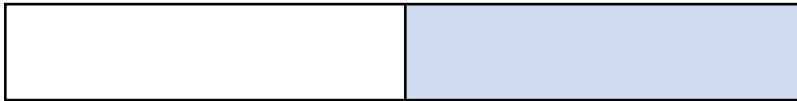


cháng fāng xíng zhǎn shì liǎo  $\frac{6}{10}$ 。  
长方形展示了  $\frac{6}{10}$ 。

$$\frac{3}{5} = \frac{6}{10}$$

1 yòng cháng fāng xíng zhǎn shì  
用长方形展示

$$\frac{1}{2} = \frac{5}{10}$$



2 huà yí gè cháng fāng xíng zhǎn shì  $\frac{1}{6}$ , rán hòu bǎ cháng fāng xíng de bù fèn fēn chéng liǎng bèi lái zhǎo dào yí gè dēng fēn shù.  
画一个长方形展示  $\frac{1}{6}$ ，然后把长方形的部份分成两倍来找到一个等分数。

$$\frac{1}{6} = \dots\dots\dots$$

3 bǎ  $\frac{1}{6}$  de fēn zǐ, fēn mǔ chéng yǐ.  
把  $\frac{1}{6}$  的分子、分母乘以2。

$$\frac{1 \times 2}{6 \times 2} = \dots\dots\dots$$

4 wèi shí me wèn tí 2 hé wèn tí 3 de dá àn yí yàng shì hé lǐ de?  
为什么问题2和问题3的答案一样是合理的?

5 yòng xià miàn de chéng fǎ shì suàn chū  $\frac{4}{5}$  de děng fēn shù。  
用下面的乘法等式算出 $\frac{4}{5}$ 的等分数。

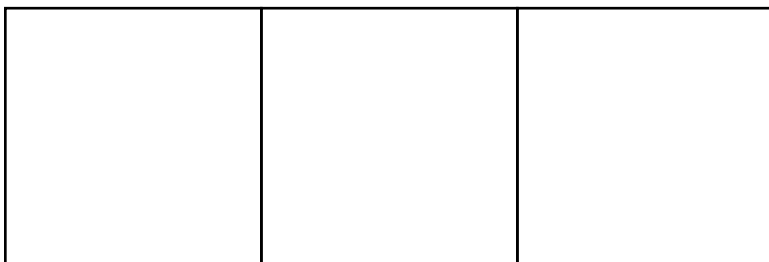
$$\frac{4 \times \square}{5 \times 2} = \frac{\square}{10}$$

$$\frac{4 \times 20}{5 \times 20} = \frac{\square}{100}$$

6 yòng cháng fāng xíng zhǎn shì  $\frac{1}{5}$ 。  
用长方形展示 $\frac{1}{5}$ 。  
rán hòu bǎ cháng fāng xíng fēn chéng fēn lái xiě yí gè děng fēn shù。  
然后把长方形分成10份来写一个等分数。



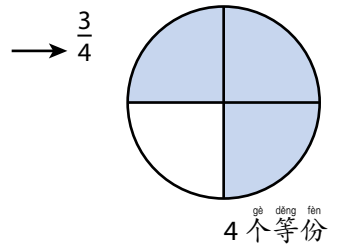
7 yòng cháng fāng xíng zhǎn shì  $\frac{2}{3}$ 。  
用长方形展示 $\frac{2}{3}$ 。  
rán hòu bǎ cháng fāng xíng fēn chéng fēn lái xiě yí gè děng fēn shù。  
然后把长方形分成12份来写一个等分数。



8 Chris yí gè  $\frac{9}{12}$  de děng fēn shù shì  $\frac{3}{6}$ 。  
Chris 一个 $\frac{9}{12}$ 的等分数是 $\frac{3}{6}$ 。  
duì ma wéi shí me?  
Chris 对吗? 为什么?

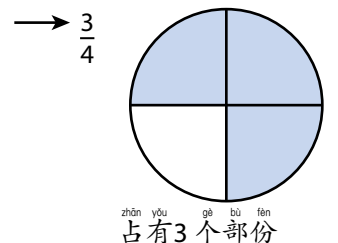
词汇

fēn mǔ 分数里下面的数  
zì gào sù nǐ yí gè zhěng tǐ liǎn yí gè  
字告诉你一个整体里面一  
gòng fēn chéng jǐ gè bù fèn  
共分成几个部份。



dēng fēn shù 连个挥着更多的  
bù tóng de fēn shù tā men shì zhěng tǐ  
不同的分数，它们是整体  
lǐ xiāng děng de bù fèn huò shù zhóu shàng yí  
里相等的部份或数轴上一  
yàng de diǎn  
样的点。

fēn zǐ 分数里下面的数字  
gào sù nǐ nǐ zhàn yǒu jǐ gè bù fèn  
告诉你你占有几个部份。



# 精通关于等分数的概念

yòng yī yòng

用一用

自己完成下面的问题。

## 1 比较

用不同的方法找到两个  $\frac{3}{3}$  的等分数。

## 2 画图

说一说你怎么把分子、分母乘以一样的数字来算出等分数。画一个长方形/模型来展示一个例子。

## 3 选择

Fia 需要  $\frac{3}{4}$  杯蔗糖。她只有  $\frac{1}{3}$  杯和  $\frac{1}{8}$  杯的量杯。

她需要用哪一种量杯？为什么？

pèi duì / fēn xiǎng

和你的小伙伴一起说一说怎么做这三个问题。

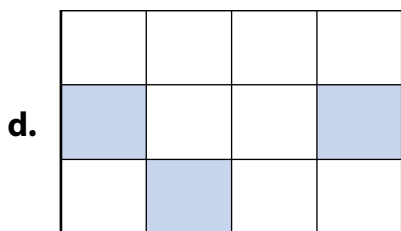
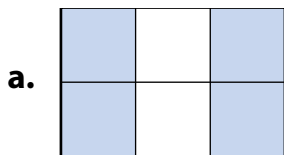


用一用

用你学到的来做问题4。

4 A部分 长方形的涂色的部分展示了一个分数。用线把左边和右边相等的分数连起来。

分数模型



分数

$\frac{1}{3}$

$\frac{2}{3}$

$\frac{10}{12}$

$\frac{3}{6}$

$\frac{1}{4}$

$\frac{6}{10}$

B部分 选一个A部分里面的分数。说一说怎么用乘法/除法检查它们是不是等分数。为什么你这样做的对的？

5 数学日志

说一说为什么  $\frac{3}{4}$  等于  $\frac{9}{12}$ 。

# 探索 比较分数的大小

nǐ xué guò liǎo zěn me yòng cháng fāng xíng lái bǐ jiào fēn shù 。 yòng nǐ zhī dào de zuò xià miàn de wèn tí 。  
你学过了怎么用长方形来比较分数。用你知道的做下面的问题。

hé June dōu yǒu yí gè yí yàng dà de néng liáng bàng 。  
Adriana 和 June 都有一个一样大的能量棒。

chī liǎo  $\frac{2}{4}$  , June chī liǎo  $\frac{2}{5}$  。 shuí chī de duō ?  
Adriana 吃了  $\frac{2}{4}$  , June 吃了  $\frac{2}{5}$  。谁吃的多?

## 试一试



## Learning Target

- Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions.

SMP 1, 2, 3, 4, 5, 6, 7

## 数学工具箱



- 分数圆形
- 分数瓦片
- 数轴
- 分数块
- 写字卡
- 分数模型

## 说一说

wèn nǐ de xiǎo huǒ bàn : nǐ tóng yì wǒ ma ? wéi shí me ?  
问你的小伙伴:你同意我吗?为什么?

gào sù nǐ de xiǎo huǒ bàn : wǒ tóng yì nǐ . . . yīn wéi . . .  
告诉你的小伙伴:我同意你...因为...

# bǐ jiào fēn shù dì zhǔn bèi 比较分数的准备

1 xiǎng yī xiǎng nǐ zhī dào gōng fēn mǔ shì shí me xiě zài měi gè gé zǐ lǐ  
想一想你知道公分母是什么，写在每个格子里。

yòng zhōng wén shù zì huà tú huà lái zhǎn shì suǒ yǒu nǐ zhī dào de dōng xī  
用中文、数字、画图来展示所有你知道的东西。

|  |                              |
|--|------------------------------|
| <p>yòng wó zì jǐ de huà<br/>用我自己的话</p> | <p>wó de huà tú<br/>我的画图</p> |
| <p>lì zǐ<br/>例子</p>                    | <p>fēi lì zǐ<br/>非例子</p>     |

gōng fēn mǔ  
公分母

bǐ jiào  $\frac{2}{3}$  hé  $\frac{2}{5}$  。 yòng gōng fēn mǔ lái bǐ jiào 。  
比较  $\frac{2}{3}$  和  $\frac{2}{5}$  。 用公分母来比较。

yòng  $>$ ,  $<$ ,  $=$  lái bǐ jiào 。  
用  $>$ ,  $<$ ,  $=$  来比较。

$$\frac{2 \times \square}{3 \times \square} = \frac{10}{\square} \qquad \frac{2 \times \square}{5 \times \square} = \frac{\square}{15}$$

$\frac{10}{\square} \bigcirc \frac{\square}{15}$  , suǒ yǐ  $\frac{2}{3} \bigcirc \frac{2}{5}$  .  
所以  $\frac{2}{3} \bigcirc \frac{2}{5}$  .

3 做这个问题，写出你是怎么做的。

Donato喝了 $\frac{3}{4}$ 瓶果汁，Aman喝了 $\frac{3}{6}$ 瓶果汁。

谁喝的果汁多？



答案

4 检查你的答案，写出你是怎么做的。

# 发展用公分子和公分母

读一读，试一试。

一只蚱蜢重  $\frac{2}{100}$  盎司。一只甲壳虫重  $\frac{8}{10}$  盎司。谁更重？

试一试

## 数学工具箱



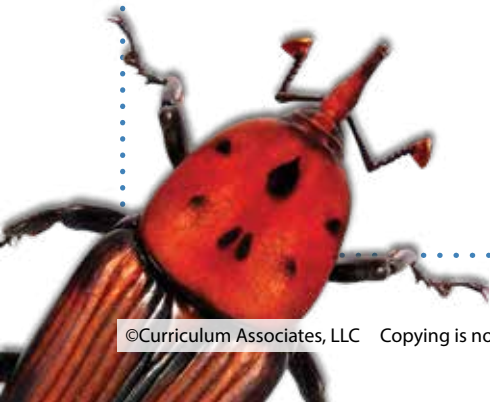
- 数轴
- 1~100的数字表格
- 十分位方块
- 写字卡
- 分数模型



### 说一说

问你的伙伴：你是怎么开始的？

告诉你的伙伴：我先做...





yòng yī yòng  
用一用

yòng nǐ xué dào de zuò xià miàn de wèn tí  
用你学到的做下面的问题。

- 9 Mel的番茄有  $\frac{8}{12}$  英尺，它的青椒有  $\frac{3}{4}$  英尺。  
用  $<$ 、 $>$ 、 $=$  比较番茄和青椒的大小。写出你是怎么做的。

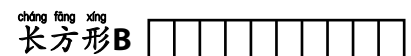
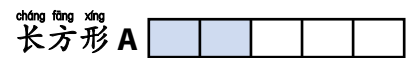


dá àn  
答案

- 10 用  $>$ 、 $<$ 、 $=$  比较  $\frac{4}{6}$  和  $\frac{2}{5}$ 。写出你是怎么做的。

dá àn  
答案

- 11 Morgan 有两个长方形的分数模型。长方形B比长方形A小。她需要给长方形B涂色几个部份？为什么？



# liàn xí gōng fēn zǐ hé gōng fēn mǔ 练习公分子和公分母

kàn xià miàn dì lì zǐ xué xí zěn me yòng gōng fēn mǔ lái bǐ jiào fēn shù 。 rán hòu zuò wèn tí 1-7。  
看下面的例子学习怎么用公分母来比较分数。然后做问题1-7。

## lì zǐ 例子

yī tiáo duàn dài yǒu  $\frac{3}{4}$  yīng chǐ , líng yī tiáo duàn dài yǒu  $\frac{5}{6}$  yīng chǐ 。 bǐ jiào tā men de dà xiǎo 。  
一条缎带有  $\frac{3}{4}$  英尺，另一条缎带有  $\frac{5}{6}$  英尺。比较它们的大小。

zhǎo dào yī gè gōng fēn mǔ 。  
找到一个公分母。

$$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$$

$$\frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

xiě chū děng fēn shù 。  
写出等分数。

$$\frac{3}{4} = \frac{9}{12}$$

$$\frac{5}{6} = \frac{10}{12}$$

bǐ jiào fēn zǐ 。  
比较分子。

$$\frac{9}{12} < \frac{10}{12}$$

yīn wéi  $9 < 10$  , suǒ yǐ  $\frac{9}{12} < \frac{10}{12}$  。  
因为  $9 < 10$  , 所以  $\frac{9}{12} < \frac{10}{12}$  。

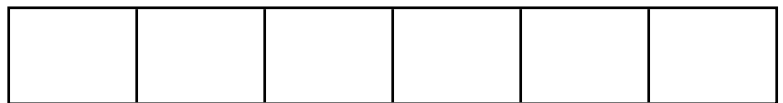
$$\frac{3}{4} < \frac{5}{6}$$

1 tú sè biǎo shì  $\frac{3}{4}$  hé  $\frac{5}{6}$   
涂色表示  $\frac{3}{4}$  和  $\frac{5}{6}$

bǐ jiào dà xiǎo 。  
比较大小。

xiě <, >, = 。  
写 <, >, = 。

$$\frac{3}{4} \bigcirc \frac{5}{6}$$



2 bǎ wèn tí 1 de měi gè cháng fāng xíng fēn chéng 12 gè děng fèn lái zhǎn shì  
把问题1的每个长方形分成12个等份来展示

tā men de děng fēn shù 。 xiě chū děng fēn shù , rán hòu bǐ jiào dà xiǎo 。  
它们的等分数。写出等分数，然后比较大小。

$$\frac{\square}{12} \bigcirc \frac{\square}{12}$$

3 yòng gōng fēn mǔ bǐ jiào  $\frac{2}{3}$  hé  $\frac{9}{12}$  。  
用公分母比较  $\frac{2}{3}$  和  $\frac{9}{12}$  。

a. xiě yī gè  $\frac{2}{3}$  de děng fēn shù 。  
写一个  $\frac{2}{3}$  的等分数。

fēn mǔ shì 12 。  
分母是12。

$$\frac{2 \times \square}{3 \times \square} = \frac{\square}{12}$$

b. bǐ jiào fēn shù  
比较分数

$$\frac{\square}{12} \bigcirc \frac{9}{12} \text{ , suǒ yǐ , } \frac{2}{3} \bigcirc \frac{9}{12}$$

4 用公分母比较  $\frac{1}{5}$  和  $\frac{2}{12}$ 。

a. 写一个  $\frac{1}{5}$  的等分数。  
分母是2。

$$\frac{1}{5} \times \frac{\square}{\square} = \frac{2}{\square}$$

b. 比较大小。

$$\frac{2}{\square} \bigcirc \frac{2}{12} \text{ So, } \frac{1}{5} \bigcirc \frac{2}{12}$$

5 比较大小，用  $<$ 、 $>$ 、 $=$ 。

a.  $\frac{2}{5} \bigcirc \frac{8}{10}$

b.  $\frac{5}{12} \bigcirc \frac{1}{3}$

c.  $\frac{3}{5} \bigcirc \frac{60}{100}$

d.  $\frac{9}{100} \bigcirc \frac{9}{10}$

6 看每个比较对不对。

|                                 | 对   | 不对  |
|---------------------------------|-----|-----|
| $\frac{2}{3} > \frac{5}{6}$     | (A) | (B) |
| $\frac{4}{10} < \frac{4}{5}$    | (C) | (D) |
| $\frac{70}{100} = \frac{7}{10}$ | (E) | (F) |
| $\frac{1}{3} > \frac{3}{1}$     | (G) | (H) |
| $\frac{3}{4} < \frac{2}{3}$     | (I) | (J) |

7 分子一样分母不一样的分数会相等吗？

用文字和数字说一说。

cí huì

### 词汇

**公分母** 两个或更多的分数的分母的共同的倍数。

**分母** 分数里下面的数字告诉你一个整体里面一共分成几个部份。

**分子** 分数里上面的数字告诉你你占有几个部份。

# 发展用基准比较分数

读一读，试一试。

Jasmine的游泳课有  $\frac{2}{3}$  个小时。她做家庭作业需要  $\frac{1}{6}$  个小时。

Jasmine 游泳课的时间多还是家庭作业的时间多？

试一试



数学工具箱

- 分数圆形
- 分数瓦片
- 数轴
- 分数块
- 写字卡
- 分数长方形/圆形



说一说

问你的小伙伴：你为什么选这个方法？

告诉你的小伙伴：我知道...所以我...



yòng yī yòng  
用一用

yòng nǐ xué dào de lái zuò xià miàn de wèn tí  
用你学到的来做下面的问题。

7 nǎ ge fēn shù dà ?  $\frac{4}{8}$  hái shì  $\frac{3}{4}$  ? yòng  $1\frac{1}{2}$  zuò jī zhǔn fēn shù 。 xiě chū nǐ shì zěn me zuò de 。  
哪个分数大？ $\frac{4}{8}$  还是  $\frac{3}{4}$  ？用  $1\frac{1}{2}$  做基准分数。写出你是怎么做的。

dá àn  
答案

8 Nathan zǒu le  $\frac{10}{10}$  de yīng lǐ 。 Sarah zǒu le  $\frac{11}{12}$  yīng lǐ 。 shuí zǒu de duō ?  
Nathan走了 $\frac{10}{10}$ 的英里。Sarah走了 $\frac{11}{12}$ 英里。谁走的多？

yòng jī zhǔn shù zì xiě chū nǐ shì zěn me zuò de 。  
用基准数字写出你是怎么做的。

dá àn  
答案

9 yòng jī zhǔn fēn shù  $\frac{1}{2}$  bǐ jiào xià miàn de fēn shù 。  
用基准分数 $\frac{1}{2}$ 比较下面的分数。

xuǎn nǎ ge fú hào ?  
选哪个符号？

$\frac{4}{6}$  ○  $\frac{3}{8}$

(A) <

(B) >

(C) =

(D) +



**Ready<sup>®</sup> Classroom**  
**Mathematics**

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**Grade 4 • Volume 2**

# Fractions, Nombres décimaux, et Mesures

## Addition, Soustraction, et Multiplication

### ✓ Auto-Vérifie

**Avant de commencer cette unité, coche les compétences que tu connais en bas. Quand tu complètes chaque leçon, vois combien de compétences de plus tu peux cocher!**

| Je peux . . .  | Avant                    | Après                    |
|--|--------------------------|--------------------------|
| Comparer des fractions avec les dénominateurs différents.  | <input type="checkbox"/> | <input type="checkbox"/> |
| Additionner et soustraire des fractions et des nombres fractionnaires.                                       | <input type="checkbox"/> | <input type="checkbox"/> |
| Additionner et soustraire des fractions sur les diagrammes à points.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Multiplier une fraction par un nombre entier.  | <input type="checkbox"/> | <input type="checkbox"/> |
| Écrire des nombres décimaux sous forme de fractions et écrire des fractions sous forme de nombres décimaux . | <input type="checkbox"/> | <input type="checkbox"/> |
| Comparer les nombres décimaux.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Résoudre les problèmes de temps et d'argent.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Résoudre les problèmes de longueur, de volume liquide, de masse et de poids.                                 | <input type="checkbox"/> | <input type="checkbox"/> |

# Développe Comprendre des fractions équivalentes

## REPRÉSENTE: MODÈLES DE L'AIRE

Essaie ces deux problèmes.

1 Utilise le modèle à droite.

a. Colorie le modèle pour montrer la fraction unitaire  $\frac{1}{4}$ .



b. Montre 8 parties égales dans le modèle et écris la fraction équivalente. ....

c. Comment le nombre et la taille des parties se comparent-ils aux fractions équivalentes?

2 Utilise le modèle à droite pour montrer  $\frac{2}{5}$



Ensuite, divise le modèle à un quantité différent de parties pour montrer une fraction équivalente.

a. Quelle fraction équivalente est montrée?

b. Il y a combien de parties colorées et de parties égales plus sont dans la fraction équivalente qu'il y a dans  $\frac{2}{5}$  ?



### DISCUTE

- Compare ton modèle du problème 2 au modèle de ta partenaire. En quoi les modèles sont-ils similaires? Comment sont les modèles différents?
- Je pense que les modèles de l'aire m'aident à comprendre les fractions équivalentes parce que ...

## REPRÉSENTE: ÉQUATIONS

Utilise les équations pour t'aider à penser à des fractions équivalentes.

- 3 Écris les nombres manquants pour trouver une fraction équivalente à  $\frac{5}{6}$  utilisant la multiplication.

$$\frac{5 \times 2}{6 \times \square} = \frac{10}{\square}$$

- 4 a. Écris les nombres manquants pour trouver une fraction équivalente à  $\frac{4}{6}$  utilisant la multiplication.

$$\frac{4 \times \square}{6 \times \square} = \frac{8}{\square}$$

- b. Que se passe-t-il si tu divises le numérateur et le dénominateur dans  $\frac{4}{6}$  par 2?

- 5 Pour trouver une fraction équivalente à  $\frac{6}{8}$ , Beth a divisé par 2 pour obtenir 4 comme dénominateur. Qu'est-ce que Beth doit faire pour trouver le numérateur? Quelles sont les fractions équivalentes?



### DISCUTE

- Regarde les problèmes 4a et 5. Comment est-ce que tu savais par quel nombre il faut multiplier ou diviser?
- Je pense que utiliser les équations de multiplication ou de division peut m'aider à trouver des fractions équivalentes parce que...

## FAIS LA CONNEXION

Complète les problèmes.

- 6 Comment est-ce que tu peux utiliser les modèles de l'aire et les équations pour faire des fractions équivalentes?

- 7 Choisis un modèle pour trouver deux fractions équivalentes à  $\frac{2}{6}$ .

# Pratique avec des fractions équivalentes

Étudie comment l'Exemple montre une façon de représenter des fractions équivalentes. Puis, résous les problèmes 1–8.

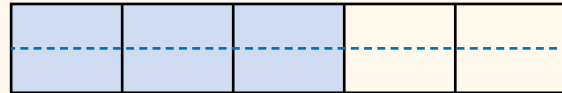
## EXEMPLE

Un modèle peut montrer des fractions équivalentes.

Le modèle a 5 parties égales. Il montre  $\frac{3}{5}$ .



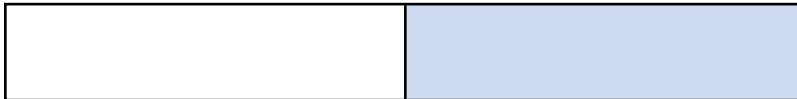
Divise le modèle en 10 parties égales pour montrer une fraction équivalente.



Le modèle montre  $\frac{6}{10}$ .

$$\frac{3}{5} = \frac{6}{10}$$

- 1 Divise le modèle pour montrer  $\frac{1}{2} = \frac{5}{10}$ .



- 2 Dessine un modèle pour montrer  $\frac{1}{6}$ . Puis, divise le modèle deux fois plus pour trouver une fraction équivalente.

$$\frac{1}{6} = \dots\dots\dots$$

- 3 Multiplie le numérateur et le dénominateur de  $\frac{1}{6}$  par 2.  $\frac{1 \times 2}{6 \times 2} = \dots\dots\dots$

- 4 Pourquoi est-il logique que la fraction que tu as écrite dans les problèmes 2 et 3 soit la même?

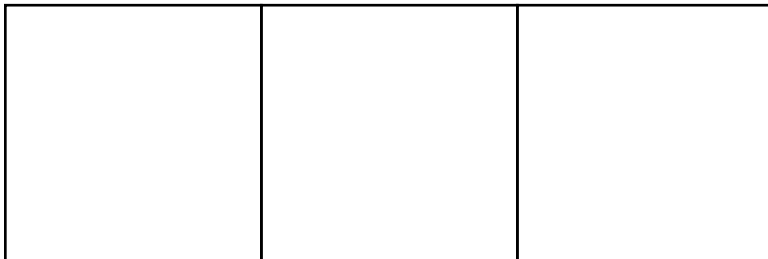
5 Écris les nombres manquants pour trouver deux fractions équivalentes à  $\frac{4}{5}$ .

$$\frac{4 \times \square}{5 \times 2} = \frac{\square}{10} \qquad \frac{4 \times 20}{5 \times 20} = \frac{\square}{100}$$

6 Colorie le modèle pour montrer  $\frac{1}{5}$ . Puis montre 10 parties égales et écris une fraction équivalente.



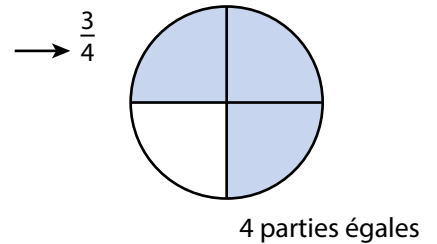
7 Colorie le modèle pour montrer  $\frac{2}{3}$ . Puis montre 12 parties égales et écris une fraction équivalente.



8 Chris dit qu'une fraction équivalente à  $\frac{9}{12}$  est  $\frac{3}{6}$ . Est-ce que Chris a raison? Explique.

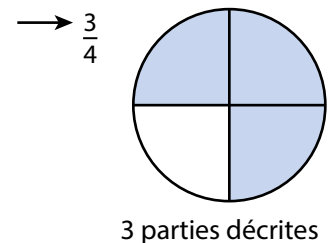
### Vocabulaire

**dénominateur** nombre situé sous la barre d'une fraction qui indique en combien de parties le tout a été divisé.



**fractions équivalentes** deux fractions sont équivalentes si elles représentent la même quantité ou le même rapport sur une droite numérique.

**numérateur** nombre situé au-dessus de la barre d'une fraction qui indique combien cette fraction contient de parties de l'unité.



# Approfondis Idées sur des fractions équivalentes

## APPLIQUE

Complète ces problèmes toi-même.

### 1 COMPARE

Utilise des méthodes différentes pour trouver deux fractions équivalentes à  $\frac{3}{3}$ .

### 2 DESSINE

Explique pourquoi tu peux multiplier le numérateur et le dénominateur par le même nombre pour obtenir une fraction équivalente. Dessine un modèle pour montrer un exemple.

### 3 CHOISIS

Fia a besoin de  $\frac{3}{4}$  d'une cup de sucre roux. Elle a seulement  $\frac{1}{3}$  cup à mesurer et une  $\frac{1}{8}$  cup à mesurer. Quelle cup est-ce qu'elle doit utiliser et pourquoi?

### PARTAGE/PARTENAIRE

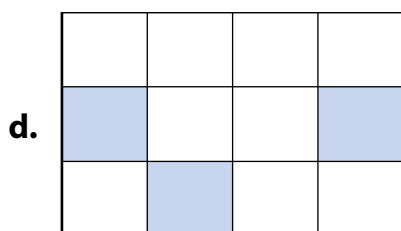
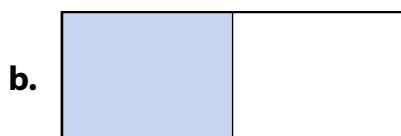
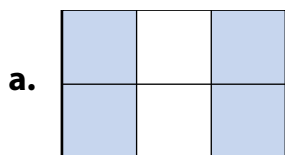
Discute de tes solutions à ces trois problèmes avec une partenaire.

## APPLIQUE

Utilise ce que tu as appris pour résoudre problème 4.

- 4 **Partie A** La partie colorée de chaque rectangle modèle une fraction. Trace une ligne entre le modèle de fraction à gauche avec la fraction équivalente à droite.

## Modèles de fractions



## Fractions

$\frac{1}{3}$

$\frac{2}{3}$

$\frac{10}{12}$

$\frac{3}{6}$

$\frac{1}{4}$

$\frac{6}{10}$

**Partie B** Choisis l'un des modèles de fractions dans Partie A. Explique comment tu peux utiliser la multiplication ou la division pour vérifier la fraction équivalente. Pourquoi cela marche-t-il?

## 5 CAHIER DE MATHS

Explique pourquoi  $\frac{3}{4}$  est équivalente à  $\frac{9}{12}$ .

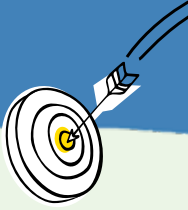
# Explore Comparer des fractions

Avant, tu as appris à comparer des fractions à l'aide de modèles.  
Utilise ce que tu sais pour résoudre ce problème.

**Adriana et June ont des barres de céréales de la même taille.**

**Adriana mange  $\frac{2}{4}$  de sa barre. June mange  $\frac{2}{5}$  de sa barre.**

**Quelle fille mange le plus de sa barre de céréales?**



## Learning Target

- Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions.

**SMP** 1, 2, 3, 4, 5, 6, 7

## ESSAIE



## Outils de maths

- fractions de cercles
- tuiles de fractions
- droite numérique
- bandes fractionnaires
- petites cartes
- modèles de fractions



## DISCUTE

**Demande à ta partenaire:**

Est-ce que tu es d'accord avec moi? Pourquoi?  
Pourquoi pas?

**Dis à ta partenaire:** Je suis d'accord avec toi quant à...  
parce que...

# Préparer pour comparer des fractions

1 Pense de ce que tu sais au sujet de les dénominateurs communs. Remplis chaque boîte. Utilise des mots, des nombres, et des images. Montre toutes les idées que tu peux.

|                       |              |
|-----------------------|--------------|
| Avec mes propres mots | Mes dessins  |
| Exemples              | Non-Exemples |

o

**dénominateur  
commun**

2 Compare  $\frac{2}{3}$  et  $\frac{2}{5}$ . Récris les fractions pour avoir un dénominateur commun.

Utilise  $>$ ,  $<$ , ou  $=$  pour comparer.

$$\frac{2 \times \square}{3 \times \square} = \frac{10}{\square} \qquad \frac{2 \times \square}{5 \times \square} = \frac{\square}{15}$$

$$\frac{10}{\square} \bigcirc \frac{\square}{15}, \text{ donc } \frac{2}{3} \bigcirc \frac{2}{5}$$

3 Résous le problème. Montre ton travail.

**Donato et Aman ont des bouteilles de jus la même taille.**

**Donato boit  $\frac{3}{4}$  de son jus. Aman boit  $\frac{3}{6}$  de son jus.**

**Quel garçon boit plus de jus?**



**Solution**.....

4 Vérifie ta réponse. Montre ton travail.

# Développe Utiliser des numérateurs et des dénominateurs communs

Lis et essaie de résoudre le problème.

Une sauterelle pèse  $\frac{2}{100}$  d'un once. Un scarabée pèse  $\frac{8}{10}$  d'un once. Qui pèse le plus?

## ESSAIE



### Outils de maths

- droite numérique
- grille de centaines
- grille de dizaines
- petites cartes
- modèles de fractions

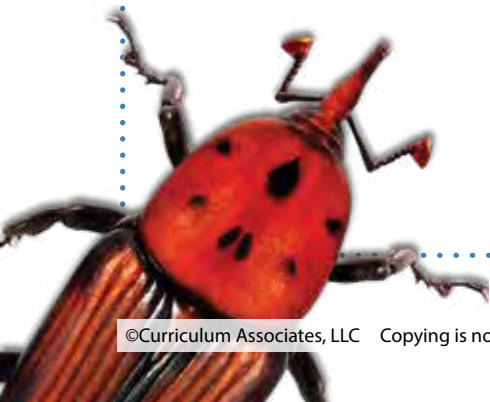


## DISCUTE

**Demande à ta partenaire:**

Comment as-tu commencé?

**Dis à ta partenaire:** J'ai commencé avec...



## APPLIQUE

Utilise ce que tu as appris pour résoudre ces problèmes.

- 9 La plante de tomate de Mel est  $\frac{8}{12}$  d'un foot de haut.  
Sa plante de poivron est  $\frac{3}{4}$  d'un foot de haut.

Compare les hauteurs des plantes en utilisant  $<$ ,  $>$ , ou  $=$ .  
Utilise un modèle à montrer ton comparaison. Montre ton travail.



**Solution** .....

- 10 Compare les fractions  $\frac{4}{6}$  et  $\frac{2}{5}$  utilisant  $<$ ,  $>$ , ou  $=$ . Utilisez un modèle pour montrer ta comparaison. Montre ton travail.

**Solution** .....

- 11 Morgan a deux modèles de fractions. Morgan colorie le Modèle B pour montrer une fraction plus petite que la fraction indiquée par Modèle A. Combien de parties du Modèle B aurait-elle pu colorier? Explique.

Modèle A 

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

Modèle B 

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

# Pratique avec des numérateurs et des dénominateurs communs

Étudie l'Exemple montrant comment comparer les fractions en trouvant un dénominateur commun. Puis, résous les problèmes 1-7.

## EXEMPLE

Une longueur de ruban est de  $\frac{3}{4}$  d'un foot. Une autre longueur de ruban est  $\frac{5}{6}$  d'un foot.

Compare les longueurs à l'aide d'un signe.

Trouve un dénominateur commun.  $\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$        $\frac{5 \times 2}{6 \times 2} = \frac{10}{12}$

Écris les fractions équivalentes.  $\frac{3}{4} = \frac{9}{12}$        $\frac{5}{6} = \frac{10}{12}$

Compare les numérateurs.  $\frac{9}{12} < \frac{10}{12}$

Puisque  $9 < 10$ , cela veut dire que  $\frac{9}{12} < \frac{10}{12}$ .

$$\frac{3}{4} < \frac{5}{6}$$

1 Colorie les modèles pour montrer

$\frac{3}{4}$  et  $\frac{5}{6}$ . Compare les fractions.

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

Écris <, >, ou =.

$$\frac{3}{4} \bigcirc \frac{5}{6}$$

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

2 Divise chaque modèle du problème 1 en 12 parties égales pour montrer une fraction équivalente. Écris les fractions équivalentes et le signe pour montrer la comparaison.

$$\frac{\square}{12} \bigcirc \frac{\square}{12}$$

3 Compare  $\frac{2}{3}$  et  $\frac{9}{12}$  en trouvant un dénominateur commun.

a. Écris une fraction équivalente à  $\frac{2}{3}$  avec un dénominateur de 12.

$$\frac{2 \times \square}{3 \times \square} = \frac{\square}{12}$$

b. Compare les fractions.

$$\frac{\square}{12} \bigcirc \frac{9}{12} \text{ So, } \frac{2}{3} \bigcirc \frac{9}{12}$$

4 Compare  $\frac{1}{5}$  et  $\frac{2}{12}$  en trouvant un numérateur commun.

a. Écris une fraction équivalente à  $\frac{1}{5}$  avec un numérateur de 2.  $\frac{1 \times \square}{5 \times \square} = \frac{2}{\square}$

b. Compare les fractions.  $\frac{2}{\square} \bigcirc \frac{2}{12}$ . Donc,  $\frac{1}{5} \bigcirc \frac{2}{12}$ .

5 Compare les fractions. Utilise les signes  $<$ ,  $>$ , et  $=$ .

a.  $\frac{2}{5} \bigcirc \frac{8}{10}$

b.  $\frac{5}{12} \bigcirc \frac{1}{3}$

c.  $\frac{3}{5} \bigcirc \frac{60}{100}$

d.  $\frac{9}{100} \bigcirc \frac{9}{10}$

6 Indique si chaque comparaison est *Vraie* ou *Fausse*.

|                                 | Vrai | Faux |
|---------------------------------|------|------|
| $\frac{2}{3} > \frac{5}{6}$     | (A)  | (B)  |
| $\frac{4}{10} < \frac{4}{5}$    | (C)  | (D)  |
| $\frac{70}{100} = \frac{7}{10}$ | (E)  | (F)  |
| $\frac{1}{3} > \frac{3}{1}$     | (G)  | (H)  |
| $\frac{3}{4} < \frac{2}{3}$     | (I)  | (J)  |

7 Est-ce que deux fractions avec le même numérateur et des dénominateurs différents peuvent-elles être égales ? Utilise des mots et des nombres pour expliquer.

### Vocabulaire

**dénominateur commun** un nombre qui est un multiple commun des dénominateurs de deux fractions ou plus.

**dénominateur** nombre situé sous la barre d'une fraction qui indique en combien de parties le tout a été divisé.

**numérateur** nombre situé au-dessus de la barre d'une fraction qui indique combien cette fraction contient de parties de l'unité.

# Approfondis Comparer des fractions

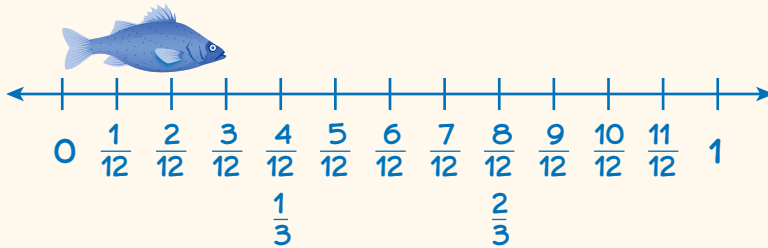
Complète l'Exemple. Puis, résous les problèmes 1–9.

## EXEMPLE

Becker pêche un poisson qui est  $\frac{3}{12}$  d'un yard long. Le poisson doit être plus long que  $\frac{1}{3}$  d'un yard pour le garder.

Est-ce que eut Becker peut garder le poisson?

Regarde comment tu peux montrer ton travail utilisant une droite numérique



**Solution** .....

Il est important que les deux mesures utilisent la même unité!



## PARTAGE/PARTENAIRE

Comment est-ce que tu peux résoudre ce problème autrement?

## APPLIQUE

- 1 Myron et Jane travaillent sur les mêmes problèmes de devoirs. Myron finit  $\frac{5}{6}$  des problèmes, et Jane finit  $\frac{2}{3}$  des problèmes. Qui finit plus de leurs devoirs? Montre ton travail.

**Solution** .....

Tu préfères quelle stratégie pour comparer les fractions?

## PARTAGE/PARTENAIRE

Comment est-ce que toi et ta partenaire avez choisi quelle stratégie à utiliser pour résoudre le problème?

- 2 Compare les fractions  $\frac{3}{10}$  et  $\frac{7}{12}$  utilisant la fraction de référence  $\frac{1}{2}$ . Montre ton travail.

Tu sais déjà à quel grandeur  $\frac{1}{2}$  est!



### Solution

- 3 Janelle marche  $\frac{3}{6}$  d'un mile. Pedro marche  $\frac{6}{10}$  d'un mile. Quelle phrase montre comment trouver la plus grande fraction?

- Ⓐ  $\frac{3}{6} = \frac{6}{12}$  et  $\frac{6}{12} < \frac{6}{10}$   
 Ⓑ  $\frac{3}{6} = \frac{6}{12}$  et  $\frac{6}{12} > \frac{6}{10}$   
 Ⓒ  $\frac{6}{10} = \frac{3}{5}$  et  $\frac{3}{5} < \frac{3}{6}$   
 Ⓓ  $\frac{3}{6} < \frac{1}{2}$  et  $\frac{6}{10} > \frac{1}{2}$

Tina a choisi Ⓑ comme la réponse correcte. Comment est-ce qu'elle a trouvé cette réponse?

### PARTAGE/PARTENAIRE

Dessine un modèle pour vérifier ta réponse.

Il y a plusieurs façons de comparer les fractions!

### PARTAGE/PARTENAIRE

Comment peux-tu trouver la réponse à l'aide d'une fraction de référence ?

- 4 Grant utilise  $\frac{2}{3}$  d'un cup de raisins secs et  $\frac{3}{4}$  d'un cup d'amandes pour faire un mélange. Quelle phrase peut être utilisée pour savoir s'il y a plus de raisins secs ou d'amandes dans le mélange?

- Ⓐ  $\frac{2}{3} = \frac{8}{12}$  et  $\frac{3}{4} = \frac{9}{12}$   
 Ⓑ  $\frac{2}{3} = \frac{4}{6}$  et  $\frac{3}{4} = \frac{4}{5}$   
 Ⓒ  $\frac{2}{3} = \frac{6}{9}$  et  $\frac{3}{4} = \frac{6}{12}$   
 Ⓓ  $\frac{2}{3} = \frac{6}{9}$  et  $\frac{3}{4} = \frac{6}{7}$



- 5 Choisis  $>$ ,  $<$ , ou  $=$  pour faire une comparaison vraie pour chaque paire de fractions.

|                                       | $>$ | $<$ | $=$ |
|---------------------------------------|-----|-----|-----|
| $\frac{8}{3} \square \frac{9}{4}$     | Ⓐ   | Ⓑ   | Ⓒ   |
| $\frac{7}{10} \square \frac{7}{8}$    | Ⓓ   | Ⓔ   | Ⓕ   |
| $\frac{1}{2} \square \frac{3}{8}$     | Ⓖ   | Ⓕ   | Ⓖ   |
| $\frac{2}{4} \square \frac{4}{6}$     | Ⓙ   | Ⓚ   | Ⓛ   |
| $\frac{7}{5} \square \frac{140}{100}$ | Ⓜ   | Ⓝ   | Ⓞ   |

- 6 Le professeur de musique de Sam lui dit de pratiquer son trombone pour  $\frac{5}{10}$  d'une heure. Sam pratique pour  $\frac{2}{6}$  d'une heure. Est-ce qu'il pratique assez longtemps? Montre ton travail.

Sam .....(pratique/ ne pratique pas) assez longtemps.

- 7 Compare les fractions  $\frac{5}{10}$  et  $\frac{5}{8}$ . Écris le signe  $>$ ,  $<$ , ou  $=$ .

$$\frac{5}{10} \bigcirc \frac{5}{8}$$

- 8 Rachel et Sierra ont le même nombre de boîtes de fruits à vendre pour une collecte de fonds. Chaque boîte est de la même taille. Rachel vend  $\frac{9}{10}$  de ses boîtes et Sierra vend  $\frac{5}{10}$  de ses boîtes. Quelle fille vend une plus grande fraction de ses boîtes de fruits? Dessine un modèle pour montrer ta réponse. Montre ton travail.

..... vend une plus grande fraction de ses boîtes de fruits.

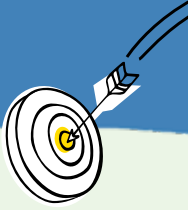
## 9 CAHIER DE MATHS

Jeff pense que  $\frac{3}{4}$  d'une petite pizza est plus que  $\frac{1}{3}$  d'une grande pizza. Alicia n'est pas d'accord. Qui a raison? Est-ce que tu as assez d'information pour savoir qui a raison? Explique.



**Auto-Vérifie** Reviens à l'Unité 4 Auto-Vérifie et coche ce que tu peux.

# Explore Addition et soustraction des fractions



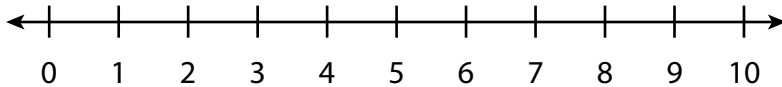
Que se passe-t-il vraiment lorsqu'on additionne et soustrait des chiffres?



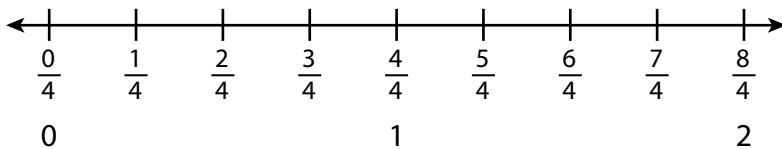
## REPRÉSENTE

Complète les modèles ci-dessous.

- 1 Montre comment trouver  $2 + 3$  utilisant une droite numérique.



- 2 Pense de comment tu peux montrer  $\frac{2}{4} + \frac{3}{4}$  sur la droite numérique.  
Montre ton travail.



## Learning Target

- Understand a fraction  $\frac{a}{b}$  with  $a > 1$  as a sum of fractions  $\frac{1}{b}$ .
- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

SMP 1, 2, 3, 4, 5, 6, 7, 8

## DISCUTE

- Compare tes droites numériques avec celles de ta partenaire. Sont-elles les mêmes?
- Je pense qu'additionner des fractions, c'est comme additionner des nombres entiers parce que ...



**Ready<sup>®</sup> Classroom**  
**Mathematics**

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**Grade 4 • Volume 2**

# 4

## Brüche, Dezimal- zahlen und Messen Addition, Subtraktion und Multiplikation

### ✓ Selbstkontrolle

**Vor Beginn dieser Einheit, markiere was du schon kannst.**

**Während der Einheit kannst du nach und nach die anderen Fähigkeiten abhaken.**

| Ich kann ...   | Vorher                   | Nachher                  |
|--|--------------------------|--------------------------|
| Vergleiche Brüche mit ungleichem Nenner.                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Addiere und subtrahiere Brüche und gemischte Zahlen.                     | <input type="checkbox"/> | <input type="checkbox"/> |
| Addiere und subtrahiere Brüche auf einem Liniendiagramm.                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Multipliziere einen Bruch mit einer ganzen Zahl.                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Schreibe Dezimalzahlen als Brüche und schreibe Brüche als Dezimalzahlen. | <input type="checkbox"/> | <input type="checkbox"/> |
| Vergleiche Dezimalzahlen.  | <input type="checkbox"/> | <input type="checkbox"/> |
| Löse Zeit- und Geldaufgaben.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Löse Aufgaben mit Länge, flüssigem Volumen, Masse und Gewicht.           | <input type="checkbox"/> | <input type="checkbox"/> |

# Entwickle ein Verständnis von äquivalenten Brüchen

## Zeige es: Flächenmodelle

Versuche diese zwei Aufgaben.

1 Benutze das Modell rechts.

a. Schattiere das Modell um den Einheitsbruch  $\frac{1}{4}$  zu zeigen.



b. Zeige 8 gleiche Teile in dem Modell und schreibe einen äquivalenten Bruch: .....

c. Vergleiche die Anzahl und Größe der Teile der zwei äquivalenten Brüche.

2 Benutze das Modell rechts um  $\frac{2}{5}$  zu zeigen.

Dann teile das Modell in eine andere Anzahl von Teilen ein, um einen äquivalenten Bruch zu zeigen.



a. Welcher äquivalente Bruch wird gezeigt?

b. Wie viele Mal mehr schattierte Teile und gleiche Teile sind in dem äquivalenten Bruch als in  $\frac{2}{5}$  ?



### Bespreche es

- Vergleiche dein Modell in Aufgabe 2 mit dem Modell deines Partners. Wie ähneln uns unterscheiden sie sich?
- Ich denke, dass Flächenmodelle mir helfen äquivalente Brüche zu verstehen, weil...

**Zeige es: Gleichungen****Benutze Gleichungen um an äquivalente Brüche zu denken.**

- 3 Schreibe die fehlenden Zahlen um einen Bruch zu finden, der mit  $\frac{5}{6}$  multipliziert äquivalent ist.

$$\frac{5 \times 2}{6 \times \square} = \frac{10}{\square}$$

- 4 a. Schreibe die fehlenden Zahlen um einen Bruch zu finden, der mit  $\frac{4}{6}$  multipliziert äquivalent ist.

$$\frac{4 \times \square}{6 \times \square} = \frac{8}{\square}$$

- b. Was passiert wenn du beide, den Zähler und den Nenner von  $\frac{4}{6}$  durch 2 teilst?

- 5 Um einen äquivalenten Bruch für  $\frac{6}{8}$  zu finden, hat Beth durch 2 geteilt, um eine 4 im Nenner zu bekommen. Was sollte Beth mit dem Zähler machen? Was sind die äquivalenten Brüche?

**Bespreche es**

- Schau die Aufgaben 4a und 5 an. Wie wusstest du durch welche Zahl du teilen/mit welcher Zahl du multiplizieren musstest?
- Ich denke, dass Multiplikations- oder Divisionsgleichungen mir helfen können äquivalente Brüche zu finden, weil...

**Verbinde es****Vervollständige die Aufgaben unten.**

- 6 Wie kannst du Flächenmodelle und Gleichungen benutzen um äquivalente Brüche zu finden?

- 7 Wähle irgendein Modell aus um zwei äquivalente Brüche für  $\frac{2}{6}$  zu finden.

# Übe mit äquivalente Brüchen

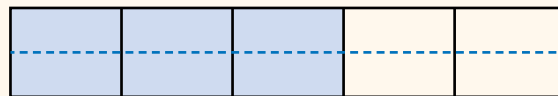
Schau dir an wie das Beispiel einen Weg zeigt um einen äquivalenten Bruch mit einem Modell zu zeigen. Dann löse Aufgaben 1–8.

## Beispiel

Ein Modell kann einen äquivalenten Bruch zeigen. Dieses Modell hat 5 gleiche Teile. Es zeigt  $\frac{3}{5}$ .



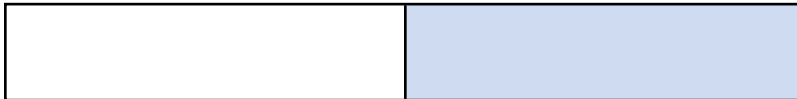
Teile das Modell in 10 gleiche Teile ein, um einen äquivalenten Bruch zu zeigen.



Dieses Modell zeigt  $\frac{6}{10}$ .

$$\frac{3}{5} = \frac{6}{10}$$

- 1 Teile das Modell ein, dass es  $\frac{1}{2} = \frac{5}{10}$  zeigt.



- 2 Zeichne ein Modell für  $\frac{1}{6}$  Dann teile das Modell in zwei Mal so viele Teile um einen äquivalenten Bruch zu finden.

$$\frac{1}{6} = \dots\dots\dots$$

- 3 Multipliziere den Zähler und Nenner von  $\frac{1}{6}$  mit 2.  $\frac{1 \times 2}{6 \times 2} = \dots\dots\dots$

- 4 Warum macht es Sinn, dass der Bruch, den du bei Aufgabe 2 und 3 geschrieben hast der gleiche ist?

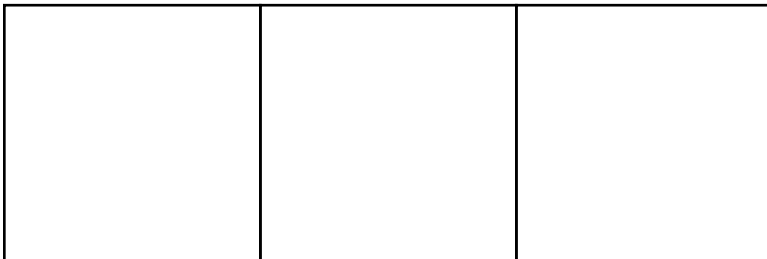
5 Schreibe die fehlenden Zahlen in die Kästchen um zwei äquivalente Brüche für  $\frac{4}{5}$  zu finden

$$\frac{4 \times \square}{5 \times 2} = \frac{\square}{10} \qquad \frac{4 \times 20}{5 \times 20} = \frac{\square}{100}$$

6 Schattiere das Modell unten um  $\frac{1}{5}$  zu zeigen. Dann zeige 10 gleich Teile und schreibe einen äquivalenten Bruch.



7 Schattiere das Modell unten um  $\frac{2}{3}$  zu zeigen. Dann zeige 12 gleiche Teile undschreibe einen äquivalenten Bruch.

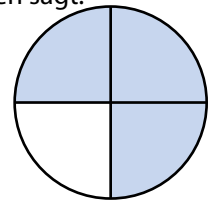


8 Chris sagt, dass der Bruch  $\frac{9}{12}$  und  $\frac{3}{6}$  äquivalent sind. Hat Chris recht? Erkläre.

### Vokabular

**Nenner** die Zahl unter dem Bruchstrich eines Bruchs, welche dir die Anzahl der gleichen Teile im Ganzen sagt.

→  $\frac{3}{4}$

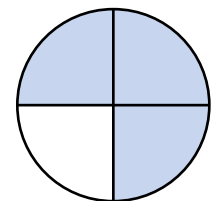


4 gleiche Teile

**äquivalente Brüche** zwei oder mehrere Brüche die den gleichen Teil oder den gleichen Punkt auf einem Zahlenstrahl benennen.

**Zähler** die Zahl über dem Bruchstrich eines Bruchs, die dir die Anzahl der gleichen Teile beschreibt.

→  $\frac{3}{4}$



3 beschriebene Teile

# Verbessere Ideen über äquivalente Brüche

## Wende es an

Vervollständige diese Aufgaben selbstständig.

### 1 Vergleiche

Benutze verschiedene Methoden um zwei äquivalente Brüche für  $\frac{3}{3}$  zu finden.

### 2 Zeichne es

Erkläre warum du den Zähler und den Nenner multiplizieren kannst um einen äquivalenten Bruch zu bekommen. Zeichne ein Modell um ein Beispiel zu zeigen.

### 3 Wähle

Fia braucht  $\frac{3}{4}$  einer Tasse braunen Zucker. Sie hat nur einen  $\frac{1}{3}$ - Messbecher und einen  $\frac{1}{8}$  Messbecher. Welchen sollte sie benutzen und warum?

#### Partnerarbeit

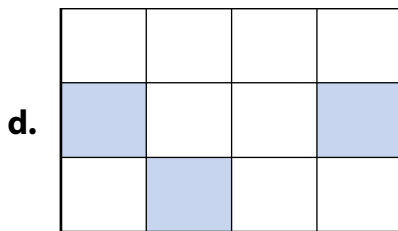
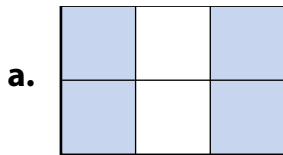
Diskutiere deine Lösungen für diese drei Aufgaben mit einem Partner.

## Wende es an

Benutze was du gelernt hast um Aufgabe 4 zu lösen.

- 4 Teil A** Der schattierte Teil jedes Rechtecks stellt einen Bruch dar.  
Verbinde die Modelle mit einem äquivalenten Bruch.

### Bruchmodelle



### Brüche

$$\frac{1}{3}$$

$$\frac{2}{3}$$

$$\frac{10}{12}$$

$$\frac{3}{6}$$

$$\frac{1}{4}$$

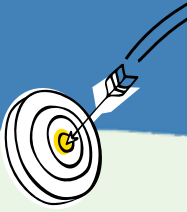
$$\frac{6}{10}$$

- Teil B** Wähle eines der Bruchmodelle in Teil A. Erkläre wie du Multiplikation oder Division benutzen kannst um zu prüfen ob es ein äquivalenter Bruch ist. Warum funktioniert das?

## 5 Mathenotizen

Erkläre warum  $\frac{3}{4}$  äquivalent zu  $\frac{9}{12}$  ist.

# Erforsche Brüche vergleichen



Du hast schon gelernt wie man Brüche mit Hilfe von Modellen vergleicht. Benutze was du weißt, um die Aufgabe unten zu lösen.

**Adriana und June haben gleich große Müsliriegel.**

**Adriana ißt  $\frac{2}{4}$  ihres Müsliriegels. June ißt  $\frac{2}{5}$  ihres Müsliriegels.**

**Welches Mädchen ißt mehr von ihrem Müsliriegel?**

## Learning Target

- Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions.

**SMP** 1, 2, 3, 4, 5, 6, 7

## Versuch es



## Mathehilfsmittel:

- Bruchkreise
- Bruchplättchen
- Zahlenstrahl
- Bruchmodelle
- Karteikarten
- Bruchmodelle



## Bespreche es

**Frag deinen Partner:**

Stimmst du mir zu?

Warum oder warum nicht?

**Sag deinem Partner:** Ich stimme dir mit ... zu, weil...

## Verbinde es

### 1 Rückschau

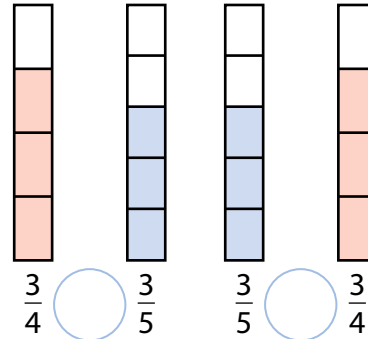
Wer ißt mehr von ihrem Müsliriegel, Adriana oder June? Erkläre.



### 2 Vorschau

Wenn du entscheidest wer mehr ißt, dann vergleichst du die Brüche  $\frac{2}{4}$  und  $\frac{2}{5}$ . Um Brüche zu vergleichen, mußt du die gleiche Größe für das Ganze benutzen.

- a. Nimm an, du hast noch zwei Müsliriegel mehr die die gleiche Größe haben. Vergleiche die Brüche  $\frac{3}{4}$  und  $\frac{3}{5}$  mit dem Flächenmodelle, um zu sehen wer mehr gegessen hat. Benutze  $>$ ,  $<$  oder  $=$  um zu vergleichen, genau wie mit ganzen Zahlen.



- b. Du kannst äquivalente Brüche benutzen  $\frac{3}{4} \times \frac{\square}{\square} = \frac{15}{\square}$  um Brüche mit verschiedenen Nennern zu vergleichen. Vergleiche  $\frac{3}{4}$  und  $\frac{3}{5}$ . Schreibe einen oder beide der Brüche so  $\frac{15}{\square} \bigcirc \frac{\square}{20}$ , so  $\frac{3}{4} \bigcirc \frac{3}{5}$ . dass sie den gleichen Nenner, **gemeinsamen Nenner**, haben. Benutze  $>$ ,  $<$  oder  $=$  um zu vergleichen.

$\frac{3}{4} \times \frac{\square}{\square} = \frac{15}{\square}$        $\frac{3}{5} \times \frac{\square}{\square} = \frac{\square}{20}$

$\frac{15}{\square} \bigcirc \frac{\square}{20}$ , so  $\frac{3}{4} \bigcirc \frac{3}{5}$ .

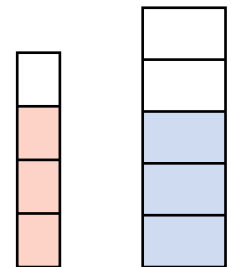
### 3 Überlege

Nimm an, dass die Müsliriegel verschiedene Größen haben. Könntest du

$\frac{3}{4}$  und  $\frac{3}{5}$  auf die gleiche Weise vergleichen? Erkläre.

.....

.....



# Entwickle gemeinsamen Zähler und Nenner benutzen

Lesen und lösen Sie die Aufgabe unten.

Ein Grashüpfer wiegt  $\frac{2}{100}$  einer Unze. Ein Käfer wiegt  $\frac{8}{10}$  einer Unze. Wer wiegt mehr?

## Versuch es



## Mathehilfsmittel:

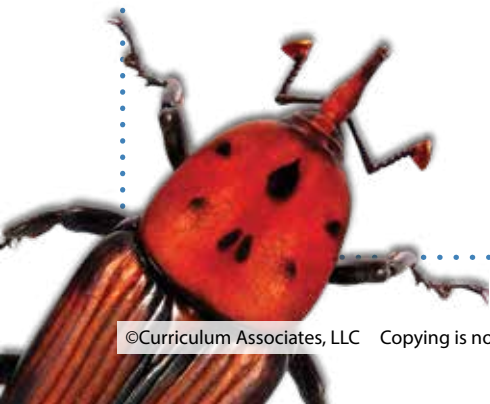
- Zahlenstrahle
- Hunderstelgitter
- Zehntelgitternetz
- Karteikarten
- Bruchmodelle

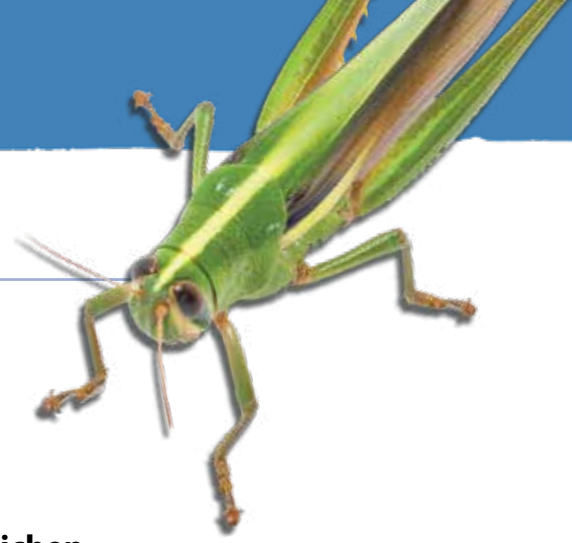


## Bespreche es

**Frag deinen Partner:** Wie hast du angefangen?

**Sag deinem Partner:** Ich habe mit...angefangen.





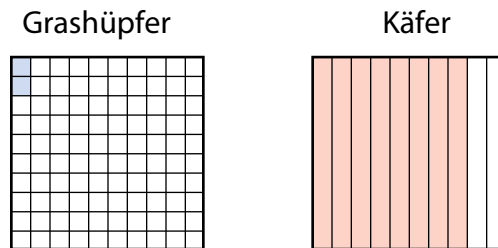
Erforsche verschiedene Wege um Brüche zu vergleichen.

Ein Grashüpfer wiegt  $\frac{2}{100}$  einer Unze. Ein Käfer wiegt  $\frac{8}{10}$  einer Unze. Wer wiegt mehr?

### Zeige es

Du kannst Modelle benutzen um dir zu helfen Brüche zu vergleichen.

Die Modelle zeigen die Brüche einer Aunze die der Grashüpfer und Käfer wiegen.



### Zeige es

Du kannst einen gemeinsamen Nenner benutzen um Brüche zu vergleichen.

Wenn du zwei Brüche vergleichst hilft es wenn sie einen gemeinsamen Nenner haben. Brüche mit dem gleichen Nenner haben gleich große Teile. Die Nenner sagen wie viele dieser Teile jeder Bruch hat. Wenn zwei Brüche den gleichen Nenner haben, kannst du die Zähler vergleichen.

Vergleiche  $\frac{2}{100}$  und  $\frac{8}{10}$ .

Die Brüche haben keinen gemeinsamen Nenner. Finde einen Bruch, der äquivalent zu  $\frac{8}{10}$  ist und einen Nenner von 100 hat.

$$\frac{8 \times 10}{10 \times 10} = \frac{80}{100}$$

Jetzt vergleiche die Nenner von  $\frac{2}{100}$  und  $\frac{80}{100}$ .

$$80 > 2$$

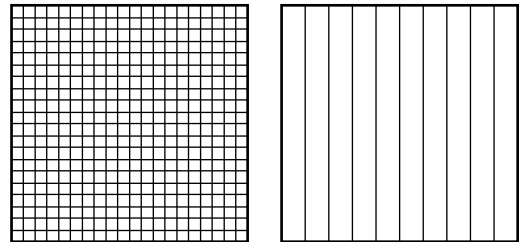
Also  $\frac{80}{100} > \frac{2}{100}$  und  $\frac{8}{10} > \frac{2}{100}$ .

## Verbinde es

Benutze was du auf der vorherigen Seite gelernt hast, um zu verstehen wie du Brüche mit Hilfe eines gemeinsamen Nenners vergleichen kannst.

1 Was ist an äquivalenter Bruch für  $\frac{2}{100}$  der einen Nenner von 8 hat? .....

2 Ein Modell ist in 400 gleiche Teile und das andere ist in 10 gleiche Teile geteilt.  
Welches Modell hat kleinere Teile?



3 Schattiere 8 Teile jedes Modells.

4 Bei welchem Modell ist eine größere Fläche schattiert?

5 Welcher Bruch ist größer,  $\frac{8}{400}$  oder  $\frac{8}{10}$ ? .....

6 Was wiegt mehr, der Grashüpfer oder der Käfer? .....

7 Schau auf die Nenner von  $\frac{8}{400}$  und  $\frac{8}{10}$ . Wenn zwei Brüche den gleichen Zähler haben und verschiedene Nenner, wie weißt du welcher Bruch größer ist? Erkläre.

## 8 Überlege

Schau zurück auf **Versuch es**, Strategien deiner Klassenkameraden, **Zeige es**, und **Verbinde es** Aufgaben auf dieser Seite. Welche Modelle oder Strategien magst du am meisten, um Brüche zu vergleichen? Erkläre.

.....

.....

.....

## Wende es an

Benutze was du gerade gelernt hast um diese Aufgaben zu lösen.

- 9 Mels Tomatenpflanze ist  $\frac{8}{12}$  eines Fußes groß. Ihre Pfefferpflanze ist  $\frac{3}{4}$  eines Fußes groß.  
 Vergleiche die Höhen beider Pflanzen mit Hilfe von  $<$ ,  $>$  oder  $=$ . Benutze ein Modell um deinen Vergleich zu zeigen.  
 Zeig deine Arbeit.



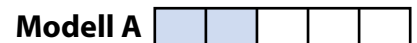
### Lösung

- 10 Vergleiche die Brüche  $\frac{4}{6}$  und mit  $\frac{2}{5}$  Hilfe von  $<$ ,  $>$  oder  $=$ . Benutze ein Modell um deinen Vergleich zu zeigen. Zeige deine Arbeit.

### Lösung

- 11 Morgan hat die zwei gezeigten Bruchmodelle .

Morgan schattiert Modell B mit einen Bruch kleiner als den Bruch den Modell B zeigt. Wie viele Teile von Model B könnte sie schattiert haben? Erkläre.



# Übe mit gemeinsamen Zähler und Nenner

Schau dir das Beispiel an wie du Brüche vergleichen kannst indem du einen gemeinsamen Nenner findest. Dann löse die Aufgaben 1-7.

## Beispiel

Eine Schleife ist  $\frac{3}{4}$  eines Fußes lang. Eine andere Schleife ist  $\frac{5}{6}$  eines Fußes lang.

Vergleiche die Länge mit Hilfe eines Symbols.

Finde einen gemeinsamen Nenner.

$$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$$

$$\frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

Schreibe die äquivalenten Brüche.

$$\frac{3}{4} = \frac{9}{12}$$

$$\frac{5}{6} = \frac{10}{12}$$

Vergleiche die Nenner.

$$\frac{9}{12} < \frac{10}{12}$$

Weil  $9 < 10$ , bedeutet es  $\frac{9}{12} < \frac{10}{12}$ .

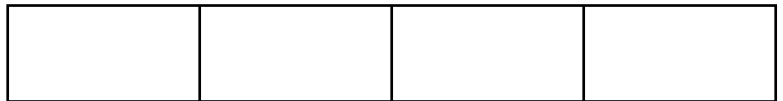
$$\frac{3}{4} < \frac{5}{6}$$

1 Schattiere die Modelle um zu zeigen

$\frac{3}{4}$  und  $\frac{5}{6}$  Vergleiche die Brüche.

Schreibe  $<$ ,  $>$ , oder  $=$ .

$$\frac{3}{4} \bigcirc \frac{5}{6}$$



2 Teile jedes Modell in Aufgabe 1 in 12 gleiche Teile ein, um äquivalente Brüche zu haben. Schreibe die äquivalenten Brüche und das Symbol um sie zu vergleichen.

$$\frac{\square}{12} \bigcirc \frac{\square}{12}$$

3 Vergleiche  $\frac{2}{3}$  und  $\frac{9}{12}$  by finding a common denominator.

a. Schreibe einen Bruch äquivalent zu  $\frac{2}{3}$  mit dem Nenner 12.

$$\frac{2 \times \square}{3 \times \square} = \frac{\square}{12}$$

b. Vergleiche die Brüche.

$$\frac{\square}{12} \bigcirc \frac{9}{12} \text{ So, } \frac{2}{3} \bigcirc \frac{9}{12}$$

4 Vergleiche  $\frac{1}{5}$  und  $\frac{2}{12}$  nachdem du einen gemeinsamen Nenner gefunden hast.

a. Schreibe einen Bruch äquivalent zu  $\frac{1}{5}$  mit dem Nenner 2.  $\frac{1 \times \square}{5 \times \square} = \frac{2}{\square}$

b. Vergleiche die Brüche.  $\frac{2}{\square} \bigcirc \frac{2}{12}$ . Also,  $\frac{1}{5} \bigcirc \frac{2}{12}$ .

5 Vergleiche die Brüche. Benutze die Symbole  $<$ ,  $>$  und  $=$ .

a.  $\frac{2}{5} \bigcirc \frac{8}{10}$

b.  $\frac{5}{12} \bigcirc \frac{1}{3}$

c.  $\frac{3}{5} \bigcirc \frac{60}{100}$

d.  $\frac{9}{100} \bigcirc \frac{9}{10}$

6 Sag ob jeder Vergleich *wahr* oder *falsch* ist.

|                                 | Wahr | Falsch |
|---------------------------------|------|--------|
| $\frac{2}{3} > \frac{5}{6}$     | (A)  | (B)    |
| $\frac{4}{10} < \frac{4}{5}$    | (C)  | (D)    |
| $\frac{70}{100} = \frac{7}{10}$ | (E)  | (F)    |
| $\frac{1}{3} > \frac{3}{1}$     | (G)  | (H)    |
| $\frac{3}{4} < \frac{2}{3}$     | (I)  | (J)    |

7 Können zwei Brüche mit dem gleichen Zähler und verschiedenen Nennern gleich sein? Benutze Wörter und Zahlen um zu erklären.

### Vokabular

**gemeinsamer Nenner** eine Zahl die das gemeinsame Vielfache der Nenner von zwei oder mehr Brüchen ist.

**Nenner** die Zahl unter dem Bruchstrich in einem Bruch, die sagt wie viele gleiche Teile in einem Ganzen sind.

**Zähler** die Zahl über dem Bruchstrich in einem Bruch, die die sagt wie viele gleiche Teile beschrieben werden.

# Verbessere Brüche vergleichen

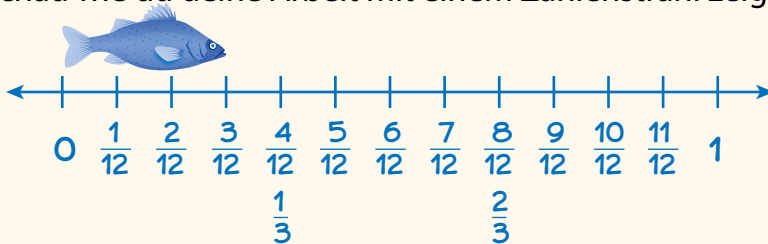
Vervollständige das Beispiel unten. Dann löse die Aufgaben 1–9.

## Beispiel

Becker fängt einen Fisch, der  $\frac{3}{12}$  eines Yards lang ist.  
Ein Fisch muss länger als  $\frac{1}{3}$  eines Yards lang sein, damit man ihn behalten darf.

Darf Becker den Fisch behalten?

Schau wie du deine Arbeit mit einem Zahlenstrahl zeigen könntest.



**Lösung** .....

Es ist wichtig, dass beide Maßstäbe die gleiche Einheit benutzen.



## Partnerarbeit

Wie könntest diese Aufgabe anders lösen?

## Wende es an

- 1 Myron und Jane arbeiten an den gleichen Hausaufgaben. Myron hat  $\frac{5}{6}$  der Aufgaben fertig und Jane hat  $\frac{2}{3}$  der Aufgaben fertig. Wer hat schon mehr Hausaufgaben fertig. Zeig deine Arbeit.

Welche Strategie ist am besten um diese Brüche zu vergleichen?

## Partnerarbeit

Wie haben dein Partner und du entschieden diese Aufgaben zu lösen?

**Lösung** .....

- 2 Vergleiche die Brüche  $\frac{3}{10}$  und  $\frac{7}{12}$  mit dem Maßstabsbruch  $\frac{1}{2}$ .  
Zeig deine Arbeit.

Du weißt schon  
wie groß  $\frac{1}{2}$   
ungefähr  
ist!



### Partnerarbeit

Zeichne ein Modell  
um deine Antwort zu  
kontrollieren.

### Lösung

- 3 Janelle geht  $\frac{3}{6}$  einer Meile. Pedro geht  $\frac{6}{10}$  einer Meile. Welche  
Aussage zeigt wie man den größeren Bruch findet?

Es gibt mehrere Wege um  
Brüche zu vergleichen!

- Ⓐ  $\frac{3}{6} = \frac{6}{12}$  und  $\frac{6}{12} < \frac{6}{10}$   
 Ⓑ  $\frac{3}{6} = \frac{6}{12}$  und  $\frac{6}{12} > \frac{6}{10}$   
 Ⓒ  $\frac{6}{10} = \frac{3}{5}$  und  $\frac{3}{5} < \frac{3}{6}$   
 Ⓓ  $\frac{3}{6} < \frac{1}{2}$  und  $\frac{6}{10} > \frac{1}{2}$

Tina hat Ⓑ als die richtige Antwort ausgewählt.  
Wie hat sie die Antwort ausgewählt?

### Partnerarbeit

Wie kannst du die  
Antwort mit einem  
Maßstabsbruch  
finden?

- 4 Grant benutzt  $\frac{2}{3}$  einer Tasse Rosinen und  $\frac{3}{4}$  einer Tasse Mandeln um Studentenfutter zu machen. Welche Aussage kannst du benutzen um herauszufinden, ob es mehr Rosinen oder Mandeln im Studentenfutter gibt?

- (A)  $\frac{2}{3} = \frac{8}{12}$  und  $\frac{3}{4} = \frac{9}{12}$
- (B)  $\frac{2}{3} = \frac{4}{6}$  und  $\frac{3}{4} = \frac{4}{5}$ .
- (C)  $\frac{2}{3} = \frac{6}{9}$  und  $\frac{3}{4} = \frac{6}{12}$
- (D)  $\frac{2}{3} = \frac{6}{9}$  und  $\frac{3}{4} = \frac{6}{7}$



- 5 Wähle <, > oder = damit der Vergleich für jedes Bruchpaar wahr ist.

|                                       | >   | <   | =   |
|---------------------------------------|-----|-----|-----|
| $\frac{8}{3} \square \frac{9}{4}$     | (A) | (B) | (C) |
| $\frac{7}{10} \square \frac{7}{8}$    | (D) | (E) | (F) |
| $\frac{1}{2} \square \frac{3}{8}$     | (G) | (H) | (I) |
| $\frac{2}{4} \square \frac{4}{6}$     | (J) | (K) | (L) |
| $\frac{7}{5} \square \frac{140}{100}$ | (M) | (N) | (O) |

- 6 Sams Musiklehrer sagt ihm, dass er seine Posaune für  $\frac{5}{10}$  einer Stunde üben soll. Sam übt für  $\frac{2}{6}$  einer Stunde. Übt er lang genug? Zeig deine Arbeit.

Kreise die richtige Antwort ein:

Sam übt lang genug.

Sam übt nicht lang genug.

- 7 Vergleiche die Brüche  $\frac{5}{10}$  und  $\frac{5}{8}$ . Schreibe das Symbol  $>$ ,  $<$  oder  $=$ .

$$\frac{5}{10} \bigcirc \frac{5}{8}$$

- 8 Rachel und Sierra haben die gleiche Anzahl an Obstkisten, die sie verkaufen wollen. Alle Kisten sind gleich groß. Rachel verkauft  $\frac{9}{10}$  ihrer Kisten und Sierra verkauft  $\frac{5}{8}$  ihrer Kisten. Welches Mädchen hat einen größeren Bruchteil ihrer Kisten verkauft? Zeichne ein Modell um deine Antwort zu zeigen. Zeig deine Arbeit.

..... hat einen größeren Bruchteil ihrer Obstkisten verkauft.

## 9 Mathenotizen

Jeff sagt  $\frac{3}{4}$  einer kleinen Pizza ist mehr als  $\frac{1}{3}$  einer großen Pizza. Alicia sagt, das ist falsch. Wer hat recht? Hast du genug Informationen um zu wissen wer recht hat? Erkläre.



 **Selbstkontrolle** Geh zurück zum Anfang von Einheit 4 und schau was du abhaken kannst.