



**Bluebonnet
Learning**
K-5 Math
EDITION 1

ENGLISH

Grade 3

Course Guide

TEACHER EDITION

Course Guide

K–5 Math Grade 3

Acknowledgment

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Notice

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Introduction

Welcome to the Grade 3 Course Guide. This guide is designed to give Grade 3 teachers specific knowledge about the structure of the instructional materials to help them effectively transition into the program. Included in this guide is information about standards, assessment tools, the focus of each module, and ways for families to support students at home. This guide also provides information about how to tailor the culture of learning to the developmental needs of students, including a background on developmental advances that affect how students learn in Grade 3 and practical strategies for troubleshooting misconceptions collaboratively with students.

Profile of a Grade 3 Math Learner

Grades 2 through 4 cover a period when students' math abilities are rapidly changing, growing, and starting to come together. Their motor skills, estimation abilities, abstract reasoning, self-regulation, and peer interaction skills need to be coordinated for them to be successful with the instructional materials. Often, this means that students may become confused or solve problems incorrectly because one or more of the requisite skills are still developing. For example, students with developing motor skills may have difficulty with manipulating tiles during activities that teach arrays.

Students at these grade levels are also at the very beginning of developing their abstract reasoning abilities. For this reason, students can find it challenging to reason about inequalities with different units (e.g., that 10 cm is smaller than 5 m, despite 10 being a larger whole number than 5) or inequalities with different place values (e.g., that 900 is less than 1,100, even though 9 is greater than 1). Students' concrete and rule-based reasoning can also make it more challenging for them to grasp key principles in arithmetic (e.g., that 3×6 is the same as 6×3).

In grades 2 through 4, many students are still developing into fluent readers, which might cause them to focus on certain terms in a word problem and ignore the rest of the context (e.g., they look for the word *total* and then add the numbers in the problem). In addition, students' self-control is still developing. This might cause students to rush to solve problems and write down the first answer they think of.

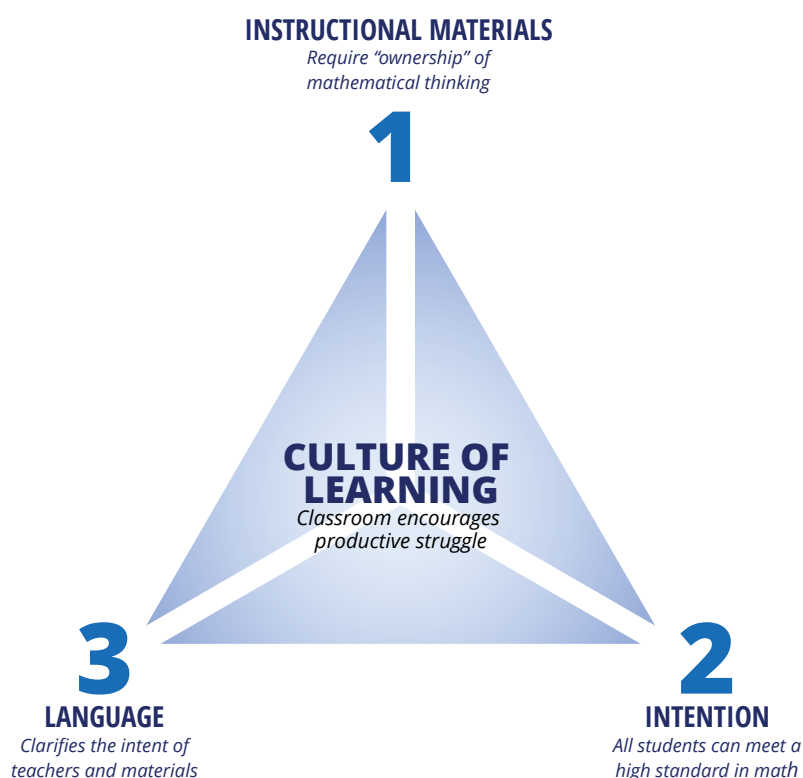
These emerging skills need to be coordinated to solve math problems correctly. As a result, teachers of students in this age range play an important role in helping young math learners learn the math content and in laying a foundation for number sense, arithmetic, problem solving, and more. This work will prepare students for more complex and representational math later in the instructional materials. This means that teachers need to look at the underlying reasons why a student might have gotten a problem wrong—whether it is an abstract reasoning skill, a literacy skill, or an impulsivity issue—and tailor instruction appropriately.

The modules in the *Bluebonnet Learning K–5 Math* instructional materials are designed to effectively help teachers analyze students' work and provide the instructional support that best meets students' needs. The activities support students' developmental needs by identifying student misconceptions and providing guidance to address these misconceptions. This ensures that students can move away from an algorithmic, rule-based version of math—which can often lead them astray as the concepts become more complex—toward a more holistic competence with mathematical reasoning. For example, teachers are encouraged to have students work in small groups on problems and explain their reasoning to one another. This approach allows teachers and students to identify and correct misconceptions as they arise.

For students to benefit from the *Bluebonnet Learning K–5 Math* instructional materials approach, they need to be provided with opportunities to engage in productive struggle. This means that students boldly and confidently learn to confront mistakes, reframe them into learning opportunities, and then move forward, deepening their mathematical reasoning throughout the year. One of the best ways to encourage students to embrace productive struggle is to promote a classroom culture of learning. A culture of learning is one in which students embrace the process of productive struggle. It is also a culture free from the common idea that “fast at math = good at math.” By creating a culture of learning and encouraging students to view challenges as an expected and even desirable part of the learning process, teachers can help students avoid a fear of math that could undermine the mathematical future of many students. Instead, students can start enjoying and feeling confident in math even if their answers do not always come quickly.

Culture of Learning in Grade 3

As noted in the Program and Implementation Guide, the way to engage math learners and help them embrace the productive struggle that’s needed to learn deeply is to create a culture of learning.¹ As shown in the figure below, a culture of learning rests on a foundation of (1) high-quality instructional materials, (2) a teacher’s intentions, and (3) the language that communicates the intent of teachers and materials.



¹ Yeager. 10 to 25, 2024.



A culture of learning can be created beginning on the first day of Module 1. A teacher can use language that communicates their intent for all students to be supported as they are held to a high standard for learning.² A culture of learning can also be maintained throughout the year since teachers will continue to support math learners as they embrace challenge. For example, teachers can use language that clarifies their intent of assigning the rigorous challenges students will face in the instructional materials.

A challenge for teachers is that it can take longer to use language that supports a culture of learning. However, using language that communicates a culture of learning supports students' developmental needs and learning. In contrast, language that communicates a culture of compliance can undermine students' motivation and engagement because it doesn't fit with their developmentally appropriate desire for autonomy and understanding.³

Teacher Behavior	Language that Communicates <i>a Culture of Compliance</i>	Language that Communicates <i>a Culture of Learning</i>
Introduce the next activity in the lesson plan.	Do this next. You'll get a bad grade if you don't.	This next activity will help you understand the material better because _____.
Give students a set of problems that they aren't supposed to finish perfectly in the allotted time (e.g. Sprint).	Just do your best.	Most of you won't answer all these problems and you might not get them all correct. That's okay. I'm trying to challenge you so that I can learn what you're prepared to do and what I need to teach you next.
Ask students to explain their thinking on a problem answered incorrectly.	Tell me why you got this wrong.	I'd like you to explain your thinking about this answer. It will help me know how to explain the concept in a way that will be more helpful to you. There is a good chance that somebody else made the same mistake, so your thinking can help the whole class learn.

The language in the second column promotes a culture of compliance. Students in grades 2 through 5 are likely to perceive this as disrespecting their need for autonomy and independent thinking.

The language in the third column promotes a culture of learning because it supports students' autonomy. It implies that students can own their thinking and that they deserve valid explanations. This approach can help students feel respected and cause them to be more motivated and engaged.

² Cohen, Steele, and Ross, "The Mentor's Dilemma," 1999.

³ Ruck, Abramovitch, and Keating. "Children's and Adolescents' Understanding of Rights," 1998.

Collaboratively Troubleshooting Student Misconceptions

It is common for students to make mistakes as they build their understanding of new or difficult concepts. From a student perspective, mistakes can logically occur whenever students try to apply previous learning to new problems that require a different approach. To help students correct their thinking and develop a better understanding, teachers can identify the knowledge that students are building on when they make a mistake.

The *Bluebonnet Learning K–5 Math* instructional materials list common student mistakes for each module. Teachers can use this information to troubleshoot mistakes collaboratively with students.

As noted in the Program and Implementation Guide, *collaborative troubleshooting* is a routine to help teachers address students' misconceptions. The three steps to collaborative troubleshooting are

- (1) surface student thinking;
- (2) validate what the student did right; and
- (3) bridge to a better understanding.

In Step 1, it's helpful to ask questions to better understand what the student was thinking when they made a decision. For example, the teacher can ask, "Can you tell me more about your thinking on this problem?" or "I noticed you wrote _____. What were some of your reasons for doing that?"

In Step 2, it's helpful to point out the parts of the problem that the student understood or did correctly. That way, the student maintains their successful thinking as they retry a problem. For example, teachers can say "I noticed you did _____ and wrote _____, and that's great because that means you understood _____."

Last, in Step 3, the teacher can build on the student's assets and bridge to a better understanding. It can help to ask guided questions that invite the student to build a stronger understanding. For example, the teacher can ask the following questions:

- "If you keep _____ [correct thinking] and changed _____ [misconception] to _____ [alternative], then what do you think might happen?"
- "What would happen if you did _____ instead of _____?"
- "If _____ [correct thinking] is true, then how does that thinking affect _____ [misconception]?"

In practice, this routine may look and sound like the following teacher–student dialogue, which is based on a misconception for Grade 3 Module 5 Topic F that is listed in the Module Overview.

Note: Teachers can adapt this sample dialogue to other misconceptions listed in the Module Overview.



Scenario: A student makes an error comparing the fractions $\frac{1}{6}$ and $\frac{1}{8}$. The student mistakenly believes $\frac{1}{8}$ is greater than $\frac{1}{6}$. The teacher has a one-on-one discussion with the student.

Step 1: Surface student thinking.

T: How did you decide that $\frac{1}{8}$ is greater than $\frac{1}{6}$?

S: I saw that they are both unit fractions, so I looked at the fractional units. I know 8 is more than 6, so $\frac{1}{8}$ is greater than $\frac{1}{6}$.

Step 2: Validate what the student did right.

T: You are right that 8 is greater than 6 when we are working with whole numbers. Are we using whole numbers when we compare these two numbers? Read these numbers aloud.

S: 1 eighth. 1 sixth.

Step 3: Bridge to a better understanding.

T: Let's draw two rectangles to model these fractions. Make sure the rectangles are the same size.

S: (Draw rectangles.)

T: Partition the first rectangle into eighths and the second rectangle into sixths.



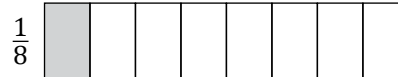
S: (Partition.)

T: What do you notice about the number of parts and the size of the parts in the first rectangle?



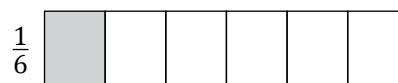
S: There are more parts, but they are smaller.

T: Model 1 eighth and 1 sixth on the rectangles by shading and labeling.



S: (Shade in 1 part of each rectangle and label.)

T: Look at the part that represents 1 sixth and compare it to the part that represents 1 eighth. Which is bigger?



S: 1 sixth is bigger.

T: Use the sentence frame _____ is greater than _____ to compare.

S: 1 sixth is greater than 1 eighth.

T: Yes! So even though the whole number 8 is greater than the whole number 6, the fractional unit of eighths means that the whole is partitioned into more parts. The more parts that the whole has, the smaller the parts are. Do you think 1 tenth is greater than or less than 1 eighth?

S: Less than

T: Why?

S: Because the whole has 10 parts and those would be even smaller than the 8 parts we drew when we modeled eighths.

Assessment Reflection Tool

An assessment reflection can be powerful in helping to surface student thinking and in helping students to monitor and track their own growth. It can also help students anticipate and process any thoughts they may have about completing an assessment.

The Assessment Reflection Tool can help teachers guide discussions both prior to and after an assessment. These discussions help the teacher promote a culture of productive struggle as students go into testing. These discussions also support students' needs after testing and give students the opportunity to reflect on their progress and learn from their mistakes after an assessment.

Grades 2–5				
		Teacher Says or Does	Students Say or Do	Teacher Says or Does
Pre-assessment	Opening Discussion	Hand out the Assessment Reflection. Say, “As we prepare to complete this assessment, take a moment to reflect on your learning and what you are thinking in anticipation of the assessment.” Encourage quiet reflection during this time. Ask, “What are you thinking? Write down your thoughts in the top box of your Assessment Reflection.”	Read their responses aloud to a partner to help them be comfortable sharing out in a larger group.	Say, “I have heard a lot of your responses. Whatever you may be thinking, I want you to remember that this assessment is just one part of your learning journey.” Say, “Remember, an assessment is just a way for me to see where you are in your learning so that I can better support you.”
	Item and Content Analysis	Direct students to complete the assessment. Say, “Before you answer the assessment questions, look at each one and write a plus sign next to any questions you think you will get right. Write a minus sign next to any questions you feel unsure about. Say, “After you answer each question, feel free to go back and change any plus or minus signs. You may be unsure of a question at first glance but then find that you have the tools to solve it. Also, you may believe a question will be simple but then face difficulties when solving it.”	Complete their item analysis as they take their assessment. This will be used for the post-assessment analysis.	Monitor student responses as students complete the assessment. After the assessment, review each student’s Assessment Reflection to keep track of student confidence level trends.



Grades 2–5

Grades 2–5				
		Teacher Says or Does	Students Say or Do	Teacher Says or Does
Post-assessment	Reflection	Hand back each student’s assessment. Say, “I see a lot of things for you to be proud of, like all the work you did. Remember, this assessment is just a tool that we can use to help you know where you are along your learning journey.” Say, “I am going to give you 1 minute to write down everything you’re thinking now that you’ve taken the assessment. You will not share these reflections with other students. I will be the only one who reads them.” Consider providing a list of words to help students identify their reflections.	Take time to complete the reflection freewrite. Complete the “After the assessment” questions in the Assessment Reflection. [Note: Some students may have very clear responses, and some may need support with identifying their thoughts.]	Walk around and monitor student responses. Take the opportunity to have one-on-one conversations with any students who need support with identifying their reflections. Say, “I can see you wrote ____ about your assessment. Why?” Listen to and acknowledge student responses. Say, “We are going to work together to help you understand where the mistakes came from. Mistakes are important because they help us grow.”
	Honoring Mistakes	Say, “Let’s dive into our mistakes together. Work with your group to complete the table on your Assessment Reflection.” Invite students to select 1 or 2 questions from their Assessment Reflection. For each question, direct them to fill out a row in the table.	Write down their question choice(s) and work with their groups to complete their item analysis.	Collect Assessment Reflections and discuss specific questions with groups or individual students. Say, “I saw a lot of things to be proud of. I saw all the work and the thinking that you put into this assessment. It is also okay for you to be confused or unsure about some items on the assessment. We will work together to help you keep improving your knowledge and understanding.” Use collaborative troubleshooting to help guide students through their assessment and clear up any misconceptions.





Student Name: _____ **Date:** _____

As we prepare to complete this assessment, what are you thinking?				
Question	What are your reflections on this question during the assessment?	If the question you answered incorrectly was confusing, why was it confusing?	What did you know or what were you able to do?	What will you remember for next time?
		• I didn't know where to start. • I wasn't sure what the question was asking. • The visual (picture, chart, map, etc.) confused me. • I forgot the content. • There were words I didn't know.		
		• I didn't know where to start. • I wasn't sure what the question was asking. • The visual (picture, chart, map, etc.) confused me. • I forgot the content. • There were words I didn't know.		
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		• I didn't know where to start. • I wasn't sure what the question was asking. • The visual (picture, chart, map, etc.) confused me. • I forgot the content. • There were words I didn't know.		
Now that you are done with the assessment, what are you thinking?		What are some things you can do differently to prepare for the next assessment?		

Progression of Mathematical Concepts

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	1st QUARTER	2nd QUARTER	3rd QUARTER	4th QUARTER
	M1: Numbers to 10 (41 days)	M1: Sums and Differences to 10 (43 days)	M1: Sums and Differences to 100 (9 days) M2: Addition and Subtraction of Length Units (11 days)	M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 (22 days)	M1: Place Value, Rounding, and Algorithms for Addition and Subtraction (23 days)	M1: Place Value and Decimals (19 days)				
	M2: Two-Dimensional and Three-Dimensional Shapes (10 days)	M2: Introduction to Place Value Through Addition and Subtraction Within 20 (33 days)	M3: Place Value, Counting, and Comparison of Numbers to 1,200 (22 days)	M2: Place Value and Problem Solving with Units of Measure (31 days)	M2: Unit Conversions and Problem Solving with Metric Measurement (10 days)	M2: Multi-Digit Whole Number and Decimal Operations (37 days)				
	M3: Comparison of Length, Weight, Capacity, and Numbers to 10 (33 days)	M3: Ordering and Comparing Length Measurements as Numbers (13 days)	M4: Addition and Subtraction Within 200 with Word Problems to 100 (30 days)	M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 (26 days)	M3: Multi-Digit Multiplication and Division (38 days)	M3: Addition and Subtraction of Fractions (18 days)				
	M4: Number Pairs, Addition and Subtraction to 10 (44 days)	M4: Place Value, Comparison, Addition and Subtraction to 40 (23 days)	M5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000 (23 days)	M4: Multiplication and Area (10 days)	M4: Angle Measure and Plane Figures (20 days)	M4: Multiplication and Division of Fractions (30 days)				
	M5: Numbers 10–20, Counting to 100, and Understanding Work (31 days)	M5: Identifying, Composing, and Partitioning Shapes (18 days)	M6: Foundations of Multiplication, Division, and Area (22 days)	M5: Fractions as Numbers on the Number Line (36 days)	M5: Fraction Equivalence, Ordering, and Operations (35 days)	M5: Addition and Multiplication with Volume and Area (23 days)				
	M6: Analyzing, Comparing, and Composing Shapes (6 days)	M6: Place Value, Comparison, Understanding Income with Addition and Subtraction to 100 (35 days)	M7: Problem Solving with Length, Money, and Data (29 days) M8: Time, Shapes, and Fractions as Equal Parts of Shapes (19 days)	M6: Financial Literacy and Data (17 days)	M6: Introduction to Decimals and Financial Literacy (22 days)	M6: Problem Solving with the Coordinate Plane and Data (38 days)				

Key:

Number

Geometry

Number and Geometry, Measurement

Fractions

Sequence of Grade 3 Modules Aligned with the TEKS

Module 1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10

Module 2: Place Value and Problem Solving with Units of Measure

Module 3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Module 4: Multiplication and Area

Module 5: Fractions as Numbers on the Number Line

Module 6: Financial Literacy and Data

Module 7: Geometry and Measurement Word Problems

Summary of Year

Grade 3 mathematics is about (1) extending understanding of place value; (2) developing understanding of strategies for multiplication and division within 100; (3) developing understanding of fractions, especially the concept that fractions are numbers on the number line; and (4) describing and analyzing two-dimensional shapes.

Rationale for Module Sequence in Grade 3

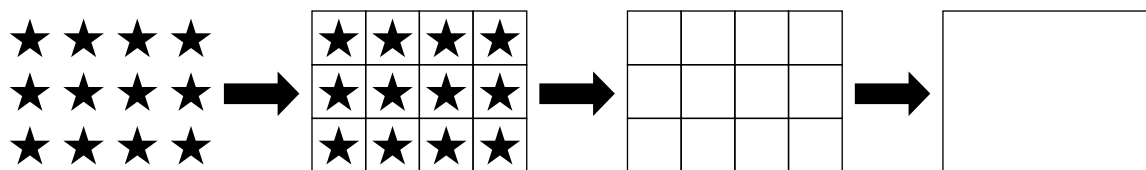
The first module builds upon the foundation of multiplicative thinking with units that started in Grade 2. First, students concentrate on the meaning of multiplication and division and begin developing fluency for learning products involving factors of 2, 3, 4, 5, and 10. The restricted set of facts keeps learning manageable and provides enough examples for students to solve one- and two-step word problems. The limited set of factors in Module 1 is also used to introduce students to the commutative and distributive properties of multiplication.

Module 2 focuses on measurement and place value. Students explore measurements of time, weight, and liquid volume. They develop an understanding of time as a continuous measurement and use different strategies to solve problems involving addition and subtraction of time intervals. Then, students use scales to measure the weights of objects, and the weights are recorded in the customary units of ounces and pounds. Next, students measure liquid volume by using the vertical number line and a graduated beaker. Students then extend their understanding of place value from Grade 2 to name numbers up to 100,000. They apply their understanding of place value to compose and decompose numbers, compare numbers, round numbers, and add and subtract numbers within 1,000. Students also draw proportional strip diagrams to solve word problems and explain their thinking (e.g., “If this strip represents 62 pounds, then a strip representing 35 pounds needs to be slightly longer than half the strip representing 62 pounds.”). Drawing the relative sizes of the lengths involved in the model prepares students for Module 5 where they learn to locate and plot points on the number line relative to each other and relative to the whole unit. Module 2 also provides students with opportunities to practice the 2, 3, 4, 5, and 10 facts as part of their fluency activities.

Students learn the remaining multiplication and division facts in Module 3 as they continue to develop their understanding of multiplication and division strategies within 100, and then use those strategies to solve two-step word problems. Students build on their understanding of multiplication as they work with multiples of 10 and then multiply two-digit numbers by one-digit numbers. Modules 1 and 3 gradually build up to the area model (the fourth model in the following image), using rectangular arrays in the context of learning multiplication and division. This necessary work prepares students for representing two-digit by one-digit multiplication with an area model and building an understanding of area in Module 4.



Progression from Rectangular Array to Area Model



By Module 4, students are ready to use their understanding of multiplication to determine the area of a rectangle with whole-number side lengths. First, they measure the area of a shape by finding the total number of same-size units of area (e.g., tiles) required to cover the shape without gaps or overlaps. Then, students connect their extensive work with rectangular arrays and multiplication to discover that they can determine the area of a rectangle by multiplying the number of rows by the number of square units in each row. Finally, students decompose composite figures into rectangles, determine the area of each rectangle, and then apply the additive property of area to determine the total area of the figure.

One goal of Module 5 is for students to transition from thinking of fractions as area or parts of a figure to thinking of fractions as points on a number line, and then finally as numbers. Students start by understanding that unit fractions are the basic building blocks used to compose non-unit fractions and the whole. Students transition from representing fractions by using objects, area models, and strip diagrams to representing fractions on the number line, which helps them understand that fractions are numbers. Students also compare fractions, find equivalent fractions in special cases, and solve problems that involve fractions.

In Module 6, students build on their understanding of Grade 2 concepts about financial literacy, data, and graphing. Students start the module by expanding upon familiar skills from Kindergarten through Grade 2 to count collections of bills and coins. Then, they explore the relationship between human capital and income by examining income data for various professions. Students also explore the relationship between the availability or scarcity of resources and how supply and demand can impact cost. Next, students identify and discuss decisions that involve planned and unplanned spending, saving, borrowing, and charitable giving. Data is presented in tables and bar graphs for students to analyze and relate to different financial literacy concepts. Students continue their work with data by representing data in a variety of forms, including scaled pictographs and scaled bar graphs. Students are also introduced to dot plots as another way to represent data. Finally, students determine the relationship between pairs of numbers in tables.

The year rounds out with students solving word problems involving the four operations, classifying and sorting two- and three-dimensional figures, and developing an understanding of perimeter as an attribute of two-dimensional shapes in Module 7. The intensive problem solving that students engage in during this module serves as a culmination of the topics studied throughout the year. The work that students do to sort and classify shapes includes identifying various attributes of shapes, such as number of sides, parallel sides, and right angles. Another attribute of two-dimensional shapes that students learn about is perimeter. Students learn how to calculate the perimeter of a variety of shapes and how to determine an unknown side length, given the shape's perimeter and the remaining side lengths. Through extensive work, including data collection, students understand that there is no relationship in general between the area of a shape and its perimeter. The Grade 3 year concludes with students solving a variety of word problems involving area and perimeter.



Grade 3 Year-at-a-Glance

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7
Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10	Place Value and Problem Solving with Units of Measure	Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10	Multiplication and Area	Fractions as Numbers on the Number Line	Financial Literacy and Data	Geometry and Measurement Word Problems
22 days	31 days	26 days	10 days	36 days	17 days	23 days
3.4D	3.2A	3.2B	3.4F	3.3A	3.4C	3.4K
3.4E	3.2B	3.4D	3.6C	3.3B	3.5E	3.5A
3.4F	3.2C	3.4E	3.6D	3.3C	3.8A	3.5B
3.4H	3.2D	3.4F		3.3D	3.8B	3.6A
3.4J	3.4A	3.4G		3.3E	3.9A	3.6B
3.4K	3.4B	3.4H		3.3F	3.9B	3.6C
3.5A	3.5A	3.4I		3.3G	3.9C	3.7B
3.5B	3.7C	3.4K		3.3H	3.9D	3.8A
3.5D	3.7D	3.5A		3.6E	3.9E	
	3.7E	3.5B		3.7A	3.9F	
		3.5C				
		3.5D				
		3.5E				

Boldface = Focus Standard





Grade 3 Scope and Sequence

Bluebonnet Learning K–5 Math Instructional Materials: Grade 3 Scope and Sequence			
Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
Module 1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10	A: Multiplication and the Meaning of the Factors B: Division as an Unknown Factor Problem C: Multiplication Using Units of 2 and 3 Mid-Module Assessment Task D: Division Using Units of 2 and 3 E: Multiplication and Division Using Units of 4 F: Distributive Property and Problem Solving Using Units of 2–5 and 10 End-of-Module Assessment Task Assessments: 2 Lessons days: 19 Assessment days: 3 Total instructional days: 22	Students conceptual understanding of multiplication and division with units of 2–5 and 10, exploring the relationship between multiplication and division, and solving word problems. Students will: - Identify the number of groups and the size of each group in an array. - Write multiplication equations using an array. - Divide objects into equal groups or show how many objects are in a group. - Solve word problems with unknown factors and find the quotient. - Show understanding of the commutative property and the break apart and distribute strategy and solve word problems involving these two strategies. - Solve word problems involving the two different types of division problems (determine the size of the group or determine the number of groups). - Solve multiplication and division problems that use units of 2–5 and 10. - Break apart arrays and number bonds into smaller multiplication and division problems using the break apart and distribute strategy. - Solve two-step word problems using addition, subtraction, multiplication, and/or division.	TEKS MPS 3.1A 3.1B 3.1D 3.1F 3.1G TEKS 3.4D 3.4E 3.4F 3.4H 3.4J 3.4K 3.5A 3.5B 3.5D ELPS 1.A 1.E 1.F 2.C 2.E 2.I 3.B 3.C 3.D 3.E

Grade 3 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			3.F 3.G 3.H 4.D 4.G 5.B
Module 2: Place Value and Problem Solving with Units of Measure	A: Time Measurement and Problem Solving B: Measuring Weight and Liquid Volume C: Place Value and Comparing Multi-Digit Whole Numbers Mid-Module Assessment Task D: Rounding to the Nearest Ten, Hundred, Thousand, and Ten Thousand E: Two- and Three-Digit Measurement Addition Using the Standard Algorithm F: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm End-of-Module Assessment Task Assessments: 2 Lessons days: 28 Assessment days: 3 Total instructional days: 31	Students explore measurement of time, weight, and liquid volume, and extend place value understanding to numbers up to 100,000. Students will: - Solve word problems involving addition and subtraction of time intervals. - Measure weight by using pounds and ounces and measure liquid volume by using gallons, quarts, pints, cups, fluid ounces, liters, and milliliters. - Solve word problems involving weight, liquid volume, and capacity. - Represent numbers up to 100,000 on a place value chart. - Write numbers in unit form, standard form, expanded form, expanded notation, and word form. - Compare numbers using $<$, $>$, or $=$. - Order whole numbers using place value and number lines. - Round numbers to the nearest ten and hundred using a vertical number line. - Estimate sums and differences by rounding or by using compatible numbers. - Add and subtract two- and three-digit numbers using the standard algorithm. - Solve one- and two-step word problems involving addition and subtraction.	<u>TEKS MPS</u> 3.1D 3.1E 3.1F <u>TEKS</u> 3.2A 3.2B 3.2C 3.2D 3.4A 3.4B 3.5A 3.7C 3.7D 3.7E <u>ELPS</u> 1.A 1.D 1.E 2.C 2.E 2.I



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			3.C 3.D 3.E 3.F 3.H 4.D 4.G 5.B
Module 3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10	A: Multiplication as Comparison B: The Properties of Multiplication and Division C: Multiplication and Division Using Units of 6 and 7 D: Multiplication and Division Using Units up to 8 Mid-Module Assessment Task E: Multiplication and Division Using Units of 9 F: Analysis of Patterns and Problem Solving Including Units of 0 and 1 G: Multiplication of Single-Digit Factors and Two-Digit Factors End-of-Module Assessment Task Assessments: 2 Lessons days: 23 Assessment days: 3 Total instructional days: 26	Students explore multiplication and division with units of 0, 1, 6–9, and multiples of 10, multiplying two-digit numbers by one-digit numbers, and solving word problems. Students will: • Explore multiplication as a comparison of one quantity to another and determine how many times greater one quantity is than another by using strip diagrams. • Use input–output tables to explore multiplication as a comparison. For example, if 2 items go into a box and 4 items come out, the number that comes out is 2 times as much as the number that goes in. • Find the value of the unknown in simple equations and in word problems. • Solve multiplication and division problems that use units of 0, 1, 6, 7, 8, and 9. • Use parentheses to group numbers to make an easier problem. • Use the Read–Draw–Write process to solve two-step word problems involving addition, subtraction, multiplication, and division. • Use place value disks and a place value chart to solve multiplication problems.	<u>TEKS MPS</u> 3.1D 3.1E 3.1F <u>TEKS</u> 3.2B 3.4D 3.4E 3.4F 3.4G 3.4I 3.4K 3.5A 3.5B 3.5C 3.5D 3.5E 3.4H <u>ELPS</u> 1.B 1.E



Grade 3 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
		- Multiply two-digit numbers by one-digit numbers by drawing models and by using the standard algorithm. - Solve word problems that require multiplying two-digit numbers by one-digit numbers.	1.F 2.C 2.D 2.E 2.I 3.D 3.E 3.F 3.G 3.H 4.C 4.F 4.G 5.G
Module 4: Multiplication and Area	A: Concepts of Area Measurement B: Arithmetic Properties and Applications of Area End-of-Module Assessment Task Assessments: 1 Lessons days: 8 Assessment days: 2 Total instructional days: 10	Students explore area as an attribute of two-dimensional figures and relating it to prior understandings of multiplication. Students will: - Label the side lengths of rectangles based on the number of square tiles shown. - Skip-count to find the unknown area and write multiplication sentences that describe an array. - Find the unknown side length when given the area and one side length of a rectangle. - Draw rows and columns to determine the area of a rectangle given an incomplete array. - Use multiplication to determine the area of a rectangle. - Break apart rectangles and reconnect the pieces to form new rectangles, showing that the areas are still the same.	<u>TEKS MPS</u> 3.1B 3.1C 3.1D 3.1E 3.1F 3.1G <u>TEKS</u> 3.6C 3.6D 3.4F <u>ELPS</u> 1.A



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
		Find the total area of combined rectangles when given the dimensions of some of the side lengths.	1.F 2.C 2.E 2.I 3.D 3.E 3.F 4.F 4.G 5.G
Module 5: Fractions as Numbers on the Number Line	A: Partitioning a Whole into Equal Parts B: Unit Fractions and Their Relation to the Whole C: Comparing Unit Fractions and Specifying the Whole Mid-Module Assessment Task D: Fractions on the Number Line E: Equivalent Fractions F: Comparison and Size of Fractions End-of-Module Assessment Task Assessments: 2 Lessons days: 33 Assessment days: 3 Total instructional days: 36	Students extend and deepen prior knowledge of fractions as equal partitions of a whole to fractions as numbers on a number line. Students will: - Partition a line or shape into equal parts and name the fractional units. - Represent unit fractions in multiple ways. - Write a fraction as a sum of unit fractions. - Shade and compare fractional amounts using models. - Locate and label fractions on a number line. - Use a number line to compare fractions by reasoning about the distance of the fraction from zero and from other fractions. - Use drawings and number lines to determine whether two fractional amounts are equivalent. - Complete given fractions to make equivalent fractions $\left(\text{e.g., } \frac{1}{2} = \frac{2}{4} \right).$ - Show equivalent fractions on a number line. - Draw a model to compare fractions in word problems.	<u>TEKS MPS</u> 3.1E 3.1F 3.1G <u>TEKS</u> 3.3A 3.3B 3.3C 3.3D 3.3E 3.3F 3.3G 3.3H 3.6E 3.7A <u>ELPS</u> 1.A 1.D 1.E



Grade 3 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			2.C 2.D 2.E 2.F 2.I 3.C 3.D 3.E 3.G 3.H 3.J 4.D 4.F 4.G 5.F 5.G
Module 6: Financial Literacy and Data	A: Financial Literacy B: Generate and Analyze Categorical Data C: Represent Number Pairs in a Table End-of-Module Assessment Task Assessments: 1 Lessons days: 15 Assessment days: 2 Total instructional days: 17	Students explore financial literacy and build on previous knowledge of data and graphing. Students will: - Find the value of a collection of coins and bills. - Explore different professions and their salaries. - Use the words <i>supply</i> and <i>demand</i> to explain how these concepts affect price. - Solve real-world problems related to saving money for a purchase. - Use the words <i>borrow</i> and <i>interest</i> to solve real-world problems. - Create pictographs, scaled bar graphs, and dot plots by using given data sets and answer questions about the data.	<u>TEKS MPS</u> 3.1C 3.1E 3.1F <u>TEKS</u> 3.4C 3.5E 3.8A 3.8B 3.9A 3.9B 3.9C



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
		- Solve one- and two-step word problems by using data displayed in pictographs, bar graphs, and dot plots. - Analyze and create patterns and relationships between pairs of numbers in a table.	3.9D 3.9E 3.9F <u>ELPS</u> 1.A 1.F 2.C 2.E 2.I 3.D 3.E 3.F 3.J 4.E 5.G
Module 7: Geometry and Measurement Word Problems	A: Solving Word Problems B: Attributes of Two- and Three-Dimensional Figures C: Problem Solving with Perimeter Mid-Module Assessment Task D: Recording Perimeter and Area Data on Dot Plots E: Problem Solving with Perimeter and Area End-of-Module Assessment Task Assessments: 2 Lessons days: 20 Assessment days: 3 Total instructional days: 23	Students practice with word problems and investigate geometry and perimeter. Students will: - Solve a variety of one- and two-step word problems involving addition, subtraction, multiplication, and/or division by using the Read–Draw–Write (RDW) process. - Identify polygons based on their attributes. - Use a ruler and a right angle tool to draw figures with given attributes. - Classify and sort two- and three-dimensional figures according to their attributes (e.g., faces, edges, vertices). - Identify perimeter and distinguish it from the area of a shape. - Trace around shapes to conceptually understand perimeter.	<u>TEKS MPS</u> 3.1A 3.1B 3.1C 3.1E 3.1G <u>TEKS</u> 3.4K 3.5A 3.5B 3.6A 3.6B 3.7B 3.6C 3.8A



Grade 3 Scope and Sequence (*Continued*)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
		• Measure and label side lengths to calculate the perimeter of given shapes. • Determine the perimeters of irregular shapes made up of several rectangles and of regular polygons that have unknown measurements. • Compare, analyze, and draw conclusions about the perimeters and areas of different rectangles. • Create and analyze dot plots. • Solve word problems involving area and perimeter. • Determine both the area and perimeter when given a model or a word problem.	<u>ELPS</u> 1.D 1.E 1.F 2.C 2.E 2.I 3.C 3.E 3.G 3.H 3.J 4.G 5.B 5.G
	Total instructional days: 165		



Grade 3 Standards by Lesson

Grade 3 TEKS Mathematical Process Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons
3.1A	11, 12, 18	2, 23, 24	3		29, 33	3–6	19, 20
3.1B	5, 13, 19	5, 9, 19, 27	14, 17	5	11, 30	13	2, 18
3.1C	16	4, 8, 15, 26, 28	10	8	21	9	3
3.1D	1, 3, 4	1, 3, 11, 14	6, 8, 15, 16	4	6, 10, 15, 17, 19, 23	7, 8	15, 17
3.1E	9, 10, 14	7, 10, 16, 18, 25	2, 5, 9, 18, 20, 21	1	1–3, 12, 24, 25, 31	12, 14	1, 5, 6, 11, 12, 16
3.1F	2, 7, 8	6, 12, 20, 22	1, 4, 12, 13, 19, 22	3, 7	5, 8, 16, 18, 22, 26, 27	1, 2, 15	13
3.1G	6, 15, 17	13, 17, 21	7, 11, 23	2, 6	4, 7, 9, 13, 14, 20, 28, 32	10, 11	4, 7–10, 14



Grade 3 TEKS Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons
3.2A		6, 10–13, 20, 21, 25, 26					
3.2B		10–28	4				
3.2C		15–19, 22, 23, 27					
3.2D		13, 14				3	
3.3A					1–21, 24		
3.3B					5–7, 16–21, 24		
3.3C					1–21, 24, 28, 32		
3.3D					8–11, 15–18, 23, 28, 32		
3.3E					2–15		
3.3F					22–30		
3.3G					19–28		
3.3H					12, 13, 19–21, 29–33	6	
3.4A		2, 3, 5, 9, 20–26	5–23				2
3.4B		15–19, 22, 27, 28					
3.4C		19				1–6, 9, 14	
3.4D	1–4, 7–9, 14–19		5–8, 12, 13, 16, 18, 19, 22				
3.4E	1–7, 9–19		5–23		1–5, 8, 9, 11–14, 19, 22	1, 2, 7, 8, 12–15	
3.4F	1–4, 7–19		1–23	1–8	3–9, 11–14, 19, 22, 31, 33	12, 13	
3.4G			18–23				
3.4H	4–6, 11–19		5–17				



Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons
3.4I			16				
3.4J	4–6, 11–19				19, 23		
3.4K	1–19		5–23				1–3, 18–20
3.5A		2, 3, 5, 9, 20–36, 28	11, 12, 15–23				1–3, 8–13, 18–20
3.5B	1–3, 11–14, 17–19	18	3, 7, 9–12, 15–23			7, 8	1–3, 8–13, 18–20
3.5C			1–4			15	
3.5D	4–19		5–17			9	
3.5E			1–10, 13–23			14, 15	
3.6A							2, 4–7, 18–20
3.6B							2, 4–13, 18–20
3.6C				1–8			14–17
3.6D				1–8			
3.6E					1–14		
3.7A					16–20		
3.7B							8–20
3.7C		1–3, 20, 21			9, 11–13, 15		
3.7D		4, 8, 9, 20, 21, 25–28					
3.7E		6, 7, 9, 15, 20, 21, 28					
3.8A						7–13	14–17
3.8B						10, 12, 13	
3.9A		3				3	
3.9B						4	
3.9C						5	
3.9D						6	
3.9E						5	
3.9F						5, 6	



Grade 3 English Language Proficiency Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons
1.A	4–6	1–14		6–8	16–28	1, 6, 7, 9	
1.B			1, 2, 4				
1.D		26, 28			6–11		4–7
1.E	1–3, 11–13	1–3	1–4		1–5, 29–33		4–7
1.F	7–10, 14–16		8–10	6–8		1–6	1–3
2.C	7–10	4–19	8–10	1–5	1–5	1–11, 14	8–13
2.D			8, 9		16–21		
2.E	1–6, 14–16	25–28	5–10, 13–23	1–8	1–28	7, 8, 10, 11, 15	1–20
2.F					16–22, 29		
2.I	1–19	1–28	5–23	1–5	1–33	14, 15	8–13
3.B	7–10						
3.C	11–13	25–28			1–15, 22–33		14–17
3.D	14–16	15–19	5–7	1–5	6–11, 16–21	14, 15	
3.E	1–3, 7–10, 14–19	1–3, 10–28	8–17	1–5	1–11, 22–33	1–7, 9–11, 13–15	1–17
3.F	4–6	4–9, 25–28	1–4, 8–10	6–8		7–13	
3.G	17–19		15–23		1–5		18–20
3.H	7–10, 14–19	4–9	5–7, 11–23		12–15, 29–33		8–20
3.J					22–28	14, 15	4–7, 14–17
4.C			18–23				
4.D	1–6, 11–13, 17–19	1–9, 14–28			6–11		
4.E						3, 5, 6	
4.F			15–17	6–8	1–5, 29–33		
4.G	1–19	1–28	1–4, 11–23	6–8	16–21		1–3, 18–20
5.B	1–19	4–24					14–17
5.F					6–11		
5.G			1–7, 11–14, 18–23	1–8	1–5, 12–33	2–6	1–13



Grade 3 Development of Fluency

Overview

Fluency activities are designed to promote automaticity and flexibility by engaging students in ways that build fluency from conceptual understanding. The fluency activities in each lesson provide students with strategic learning opportunities to develop their proficiency with specific TEKS. While all TEKS are included in the instructional materials, some TEKS may not be practiced in a fluency activity.

Fluency Year-at-a-Glance

For specific TEKS descriptions and student expectations, refer to the relevant Fluency Close-Up tables.

GRADE 3	Module							
TEKS	1	2	3	4	5	6	7	ADSY
3.2A		•	•					•
3.2B		•						•
3.2C	•	•						•
3.2D		•				•		•
3.3A					•	•		
3.3B					•			
3.3C					•			
3.3D					•			
3.3E					•			
3.3F					•			
3.3G					•			•
3.3H					•	•		•
3.4A	•	•	•					•
3.4B	•	•	•					•
3.4C						•		
3.4D	•	•		•				•
3.4E	•	•	•	•	•	•	•	•

GRADE 3	Module							
TEKS	1	2	3	4	5	6	7	ADSY
3.4F	•	•	•	•	•	•	•	•
3.4G		•	•					
3.4H	•							
3.4I								
3.4J	•		•		•			
3.4K	•		•	•				
3.5A								
3.5B						•		
3.5C			•		•	•		
3.5D			•			•	•	
3.5E								
3.6A							•	
3.6B							•	•
3.6C				•			•	
3.6D				•				
3.6E								
3.7A								



GRADE 3	Module							
TEKS	1	2	3	4	5	6	7	ADSY
3.7B							•	
3.7C		•			•			
3.7D		•						
3.7E		•						
3.8A						•		
3.8B						•		

GRADE 3	Module							
TEKS	1	2	3	4	5	6	7	ADSY
3.9A								
3.9B								
3.9C								
3.9D								
3.9E								
3.9F								

Fluency Close-Up

Numbers and Operations

The student applies TEKS mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to:

TEKS	Module	Lessons
3.2A	2	18, 24–26, 28
	3	4, 20, 23
	ADSY	1
3.2B	2	9, 15–22, 26
	ADSY	3, 5
3.2C	1	18
	2	9, 13, 15–22, 26
	ADSY	1, 3, 5
3.2D	2	14
	6	3
	ADSY	2, 10



The student applies TEKS mathematical process standards to represent and explain fractional units. The student is expected to:

TEKS	Module	Lessons
3.3A	5	7, 10, 14, 16–17, 19–21, 24
	6	6
3.3B	5	12–13
3.3C	5	5–18, 24, 28, 32
3.3D	5	15–18, 20, 23, 32
3.3E	5	7–8, 10
3.3F	5	24–27, 29–30
3.3G	5	21
	ADSY	11
3.3H	5	8, 11, 19, 30–31, 33
	6	6
	ADSY	11

The student applies TEKS mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:

TEKS	Module	Lessons
3.4A	1	17
	2	24–26, 28
	3	11
	ADSY	4
3.4B	1	17
	2	9, 15–22, 26–27
	3	11
	ADSY	3
3.4C	6	3–5, 9, 14
3.4D	1	2–4, 8
	2	3–6
	4	1–3
	ADSY	5



TEKS	Module	Lessons
3.4E	1	1–13, 15, 19
	2	1–7, 10–11, 13, 16, 21–22, 25, 28
	3	2–3, 5–15, 17–19, 21–22
	4	1–8
	5	1–4, 6–9, 11, 14, 22, 31–33
	6	1–2, 7–8, 11–15
	7	1–6, 8–14
	ADSY	4–9, 13, 16–23
3.4F	1	8–9, 11–16, 19
	2	9, 15–17
	3	1, 5–7, 9–21, 23
	4	5, 8
	5	3–4, 8–9, 11–12, 14, 18–19, 22, 31, 33
	6	11–13
	7	1–6, 8–12, 15–20
	ADSY	8, 14–17, 19, 21
3.4G	2	9, 15–17
	3	16–19, 22
3.4H	1	5–6
3.4I	N/A	N/A
3.4J	1	5–6, 13
	3	14
	5	15–19, 23
3.4K	1	14–15
	3	5–10, 13
	4	6



Algebraic Reasoning

The student applies TEKS mathematical process standards to analyze and create patterns and relationships. The student is expected to:

TEKS	Module	Lessons
3.5A	N/A	N/A
3.5B	6	7–8
3.5C	3	2–3
	5	5
	6	15
3.5D	3	2–3, 8, 16–17
	6	9
	7	13–14
3.5E	N/A	N/A

Geometry and Measurement

The student applies TEKS mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to:

TEKS	Module	Lessons
3.6A	7	7
3.6B	7	5, 7
	ADSY	25
3.6C	4	1, 3–4, 6, 8
	7	9, 14, 17
3.6D	4	8
3.6E	N/A	N/A



The student applies TEKS mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to:

TEKS	Module	Lessons
3.7A	N/A	N/A
3.7B	7	10, 12–15, 17, 19–20
3.7C	2	1–3, 8, 10–11, 23
	5	9, 11–13, 15
3.7D	2	5, 7, 13, 20–21, 26–28
3.7E	2	5, 7, 9, 20–21, 26–28

Data Analysis

The student applies TEKS mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:

TEKS	Module	Lessons
3.8A	6	10–11
3.8B	6	10–11

Personal Financial Literacy

The student applies TEKS mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:

TEKS	Module	Lessons
3.9A	N/A	N/A
3.9B	N/A	N/A
3.9C	N/A	N/A
3.9D	N/A	N/A
3.9E	N/A	N/A
3.9F	N/A	N/A

Manipulatives and Supplies Lists

GRADE 3 MANIPULATIVES LIST		
Qty.	Item(s)	Description
1	Demonstration clock	
6	Digital scales	<i>measuring in ounces (1 per group of 4 students)</i>
1	Digital timer	
1	Eye dropper	<i>(1 per teacher)</i>
24	Geoboards	
1	Graduated beaker	<i>1000 mL</i>
6	Graduated beakers	<i>100 mL</i>
6	Graduated beakers	<i>500 mL</i>
8	Linking cubes	<i>2 different colors</i>
12	Meter sticks	
—	Modeling clay	<i>1600 g</i>
2	Pattern block	<i>sets</i>
6	Platform scales	<i>weighing in ounces and pounds (1 per 4 students)</i>
1	Play coins and bills	<i>classroom set</i>
24	Rulers	<i>inch and metric</i>
24	Sentence strips	
360	Square centimeter tiles	<i>(15 per student)</i>
432	Square inch tiles	<i>(18 per student); optional template in Module 4 Lesson 3</i>
12	Stopwatches	<i>(1 per student pair)</i>
600	Two-color counters	<i>(25 per student)</i>
1	Whole number place value cards	
25	Whole number place value disks	<i>Set 1 (1 per student, 1 per teacher)</i>
1	Yardstick	



GRADE 3 SUPPLIES LIST

Qty.	Item(s)	Description
100	Bags	<i>plastic, gallon- and quart-size, zip-top</i>
12	Bags of beans	<i>28 oz. (1 per group or student pair)</i>
12	Bags of popcorn kernels	<i>36 oz (1 per student pair)</i>
4	Bags of rice	<i>ranging in weight within 50 oz</i>
12	Bags of rice	<i>32 oz (1 per group or student pair)</i>
4	Beanbags	
1	Cardstock	<i>pack</i>
24	Colored pencils	<i>sets</i>
5	Containers	<i>1-ounce, 1-cup, 1-pint, 1-quart, 1-gallon</i>
4	Containers	<i>to toss beanbags into</i>
24	Crayons	<i>sets</i>
200	Cups	<i>clear, plastic</i>
6	Cups	<i>paper</i>
1	Document camera	
24	Dry erase markers	
24	Envelopes	<i>letter-size; optional</i>
1	Food coloring	<i>pack</i>
1	Geometric solids	<i>set, Templates–Module 7 Lesson 7</i>
24	Glue sticks	
24	Graham crackers	
24	Highlighters	
72	Index cards	
24	Markers	<i>black</i>
24	Markers	<i>boxes</i>
24	Math journals	



GRADE 3 SUPPLIES LIST

Qty.	Item(s)	Description
—	Modeling clay	1600 g
1	Pad of sticky notes	
24	Personal white boards	Build from 1 white cardstock, 1 red cardstock, and 1 sheet protector per student
8	Pitchers	(1 per group of 3 students)
8	Plastic bottles	2-liter, uniform width throughout (1 per group of 3 students, 1 per teacher)
12	Playing cards	
3	Rolls of tape	transparent
96	Rubber bands	(4 per student)
24	Scissors	
250	Sheets of blank paper	
24	Sheets of chart paper	
50	Sheets of construction paper	
144	Sheets of grid paper	centimeter or inch
24	Sheets of grid Paper	inch
—	Water	
1	Yarn	

ADSY ITEMS

Qty.	Item(s)	Description
24	Base-ten blocks	(1 set per student); optional
24	Quadrilaterals	parallelograms, rectangles, rhombuses, squares, trapezoids (1 set per student)
24	Three-dimensional shapes	cones, cubes, cylinders, hexagonal prisms, rectangular prisms, spheres, triangular prisms, square prisms (1 set per student)



Grade 3 Module 1

Tips for Families

Key Concepts Overview

Focus TEKS: **3.4D, 3.4E, 3.4F, 3.4H, 3.4J, 3.4K, 3.5A, 3.5B, 3.5D**

The focus of Module 1 is building conceptual understanding of multiplication and division with units of 2–5 and 10, exploring the relationship between multiplication and division, and solving word problems. Your student will:

- ☐ Identify the **number of groups** and the **size of each group** in an **array**.
- ☐ Write **multiplication** equations using an array.
- ☐ **Divide** objects into **equal groups** or show how many objects are in a group.
- ☐ Solve word problems with **unknown factors** and find the **quotient**.
- ☐ Show understanding of the **commutative property** and the break apart and **distribute** strategy and solve word problems involving these two strategies.
- ☐ Solve word problems involving the two different types of division problems (determine the size of the group or determine the number of groups).
- ☐ Solve multiplication and division problems that use **units** of 2–5 and 10.
- ☐ Break apart arrays and number bonds into smaller multiplication and division problems using the break apart and distribute strategy.
- ☐ Solve two-step word problems using addition, subtraction, multiplication, and/or division.

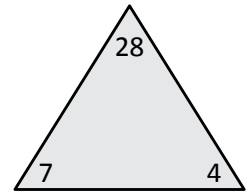
You can use the checklist above to help monitor your student’s progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Place various objects into arrays in your daily life, such as crackers on a plate, crayons, or toys that your student may have. Say to him, “How many rows are there? How many objects are in each row? Let’s skip-count the rows to find the total.”
- With your student, arrange objects (such as small snack foods like crackers, fruit snacks, grapes, or pretzels) into arrays. Then ask her to write two multiplication and two division equations that the array could represent. For example, display 4 rows of 3 grapes. The student could write $4 \times 3 = 12$, $3 \times 4 = 12$, $12 \div 3 = 4$ and $12 \div 4 = 3$.
- Ask your student to arrange objects into an array with one larger factor, such as 8×3 . Then have him break the array into two smaller parts and write a multiplication sentence for each of the parts. For example, he could separate 8×3 into the more manageable parts of $(5 \times 3) + (3 \times 3)$. $5 \times 3 = 15$, $3 \times 3 = 9$, and $15 + 9 = 24$. Therefore, $8 \times 3 = 24$.

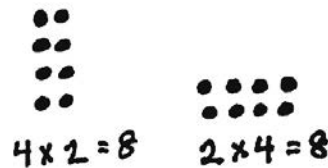


- Continue to practice multiplication and division equations from memory with factors of 2, 3, 4, 5, and 10. Have your student cut several triangles out of paper. Think of a multiplication or division fact. In each triangle, write two factors and their product (one number per corner). Ask her to state two multiplication and two division equations relating the numbers on each triangle. Cover one number with your thumb and ask her to figure out what number is hidden.

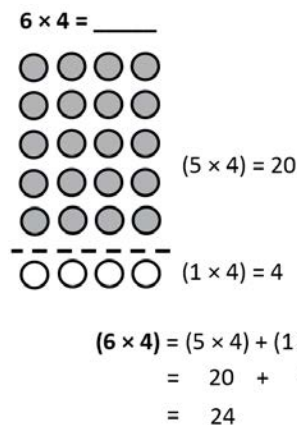


Terms

Commutative property/commutative (*Propiedad conmutativa/conmutativa*): changing the order of the factors in a multiplication expression or equation does not change its product



Distribute (*Distributivo*): to multiply each part of a decomposed factor by the other factor, or to divide each part of a decomposed total by the divisor



Factors (*Factores*): the numbers multiplied together in a multiplication expression or equation

$$\begin{array}{ccccc} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} \\ \text{factor} & & \text{factor} & & \text{product} \end{array}$$



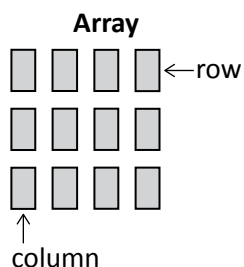
Quotient (*Cociente*): the number resulting from the division of two numbers



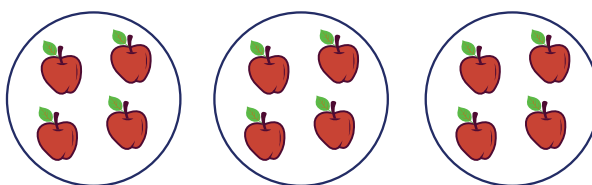
$$8 \div 4 = 2$$

↑
quotient

Models



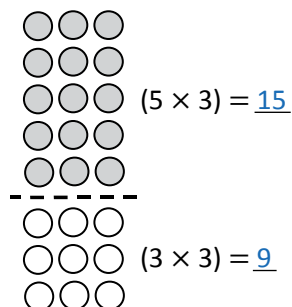
Equal Groups



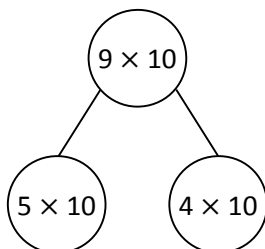
The **number of groups** is 3. The **size of the groups** is 4 apples.

Break Apart and Distribute Strategy

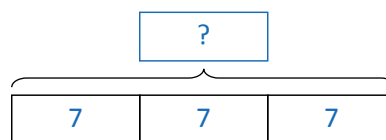
$$8 \times 3 = \underline{24}$$



$$\begin{aligned} 8 \times 3 &= (5 \times 3) + (3 \times 3) \\ &= \underline{15} + \underline{9} \\ &= \underline{24} \end{aligned}$$



Strip Diagram



Grado 3 Módulo 1

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.4D, 3.4E, 3.4F, 3.4H, 3.4J, 3.4K, 3.5A, 3.5B, 3.5D**

El enfoque del Módulo 1 es desarrollar la comprensión conceptual de la multiplicación y la división con unidades del 2 al 5 y al 10, explorando la relación entre la multiplicación y la división, y resolver problemas escritos. Se espera que su estudiante:

- ☐ Identifique el **número de grupos** y el **tamaño de cada grupo** en una **matriz**.
- ☐ Escriba ecuaciones de **multiplicación** usando una matriz.
- ☐ **Divida** los objetos en **grupos iguales** o muestre cuántos objetos hay en un grupo.
- ☐ Resuelva problemas escritos con **factores desconocidos** y encuentre el **cociente**.
- ☐ Muestre comprensión de la **propiedad conmutativa** y la estrategia de dividir y distribuir, y resuelva problemas escritos que involucren estas dos estrategias.
- ☐ Resuelva problemas de palabras que involucren los dos tipos diferentes de problemas de división (determinar el tamaño del grupo o determinar el número de grupos).
- ☐ Resuelva problemas de multiplicación y división que usen **unidades** del 2 al 5 y al 10.
- ☐ Separe matrices y vínculos numéricos en problemas de multiplicación y división más pequeños usando la estrategia de separar y distribuir.
- ☐ Resuelva problemas escritos de dos pasos usando suma, resta, multiplicación y/o división.

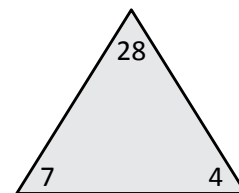
Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Coloque varios objetos en matrices en su vida diaria, como galletas en un plato, crayones o juguetes que su estudiante pueda tener. Diga: "¿Cuántas filas hay? ¿Cuántos objetos hay en cada fila? Vamos a contar las filas saltando números para encontrar el total".
- Con su estudiante, organice objetos (bocadillos pequeños como galletas saladas, meriendas de frutas, uvas o *pretzels*) en matrices. Luego, pídale que escriba dos ecuaciones de multiplicación y dos ecuaciones de división que la matriz podría representar. Por ejemplo, muestre 4 filas de 3 uvas. El estudiante podría escribir $4 \times 3 = 12$, $3 \times 4 = 12$, $12 \div 3 = 4$ y $12 \div 4 = 3$.
- Pida a su estudiante que organice los objetos en una matriz con un factor más grande, como 8×3 . Luego, pídale que divida la matriz en dos partes más pequeñas y escriba una oración de multiplicación para cada una de las partes. Por ejemplo, podría separar 8×3 en las partes más manejables de $(5 \times 3) + (3 \times 3)$. $5 \times 3 = 15$, $3 \times 3 = 9$ y $15 + 9 = 24$. Por lo tanto, $8 \times 3 = 24$.



- Continúe practicando ecuaciones de multiplicación y división de memoria con factores de 2, 3, 4, 5 y 10. Pida a su estudiante que corte varios triángulos de papel. Piense en una operación de multiplicación o división. En cada triángulo, escriba dos factores y su producto (un número por esquina). Pídale que diga dos ecuaciones de multiplicación y dos ecuaciones de división que relacionen los números de cada triángulo. Cubra un número con el pulgar y pídale que averigüe qué número está oculto.



Términos

Cociente (*Quotient*): el número resultante de la división de dos números.



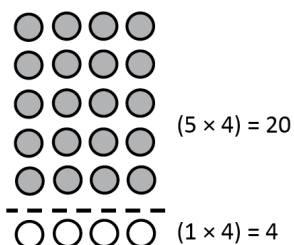
$$8 \div 4 = 2$$



cociente

Distribuir (*Distribute*): multiplicar cada parte de un factor descompuesto por el otro factor, o dividir cada parte de un total descompuesto por el divisor.

$$6 \times 4 = \underline{\quad}$$



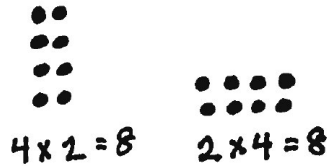
$$\begin{aligned} (6 \times 4) &= (5 \times 4) + (1 \times 4) \\ &= 20 + 4 \\ &= 24 \end{aligned}$$

Factores (*Factors*): los números multiplicados en una expresión o ecuación de multiplicación.

$$\begin{array}{ccccc} \underline{\quad} & \times & \underline{\quad} & = & \underline{\quad} \\ \text{factor} & & \text{factor} & & \text{producto} \end{array}$$



Propiedad conmutativa (*Commutative property*): cambiar el orden de los factores en una expresión o ecuación de multiplicación no cambia su producto.

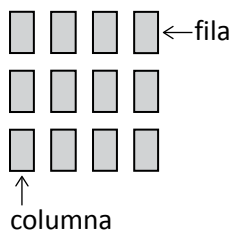


$$4 \times 2 = 8$$

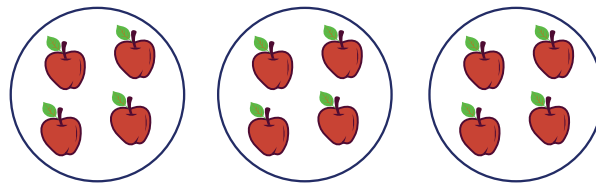
$$2 \times 4 = 8$$

Modelos

Matriz



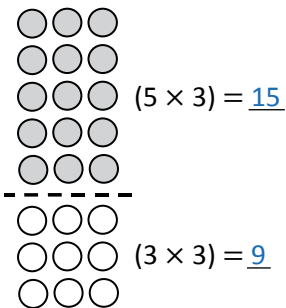
Grupos iguales



El número de grupos es 3. El tamaño de los grupos es de 4 manzanas.

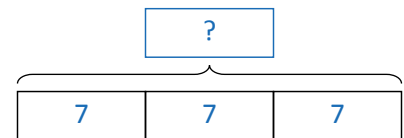
Estrategia de separar y distribuir

$$8 \times 3 = \underline{24}$$



$$\begin{aligned} 8 \times 3 &= (5 \times 3) + (3 \times 3) \\ &= \underline{15} + \underline{9} \\ &= \underline{24} \end{aligned}$$

Diagrama de tiras



Grade 3 Module 2

Tips for Families

Key Concepts Overview

Focus TEKS: **3.2A, 3.2B, 3.2C, 3.2D, 3.4A, 3.4B, 3.5A, 3.7C, 3.7D, 3.7E**

The focus of Module 2 is exploring measurement of time, weight, and liquid volume, and extending place value understanding to numbers up to 100,000. Your student will:

- ☐ Solve word problems involving addition and subtraction of time **intervals**.
- ☐ Measure weight by using **pounds** and **ounces** and measure **liquid volume** by using **gallons, quarts, pints, cups, fluid ounces, liters, and milliliters**.
- ☐ Solve word problems involving weight, liquid volume, and capacity.
- ☐ Represent numbers up to 100,000 on a place value chart.
- ☐ Write numbers in unit form, standard form, expanded form, expanded notation, and word form.
- ☐ Compare numbers using $<$, $>$, or $=$.
- ☐ Order whole numbers using place value and number lines.
- ☐ **Round** numbers to the nearest ten and hundred using a vertical number line.
- ☐ Estimate sums and differences by rounding or by using **compatible numbers**.
- ☐ Add and subtract two- and three-digit numbers using the **standard algorithm**.
- ☐ Solve one- and two-step word problems involving addition and subtraction.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Record the time your student starts an activity as they go through their day, such as practicing an instrument or reading. Tell him how many minutes the activity should last. Ask him to figure out what time it will be when the activity is complete.
- At the store, ask your student to use the food scale in the produce section. Have her guess the weight (in pounds or ounces) before she puts an item on the scale.
- Support your student as he draws and labels a place value chart (up to hundred thousands). Ask him to say a large number (up to 100,000) and represent the number on the place value chart using cereal pieces for disks. Challenge each other to say the name of the number that was created, using the number forms previously listed.
- Use a deck of cards (without the 10's or face cards) to practice addition and subtraction. Have your student turn over two or three cards to create a two- or three-digit number, and then have her turn over two or three more cards to create another number. Ask her to find the sum or the difference of the two numbers. Be sure to subtract the smaller number from the larger number.



Terms

Capacity (*Capacidad*): the amount of liquid that a container can hold



Compatible numbers (*Números compatibles*): numbers that make calculations more efficient when estimating solutions; compatible numbers are not necessarily the same numbers that are obtained by rounding

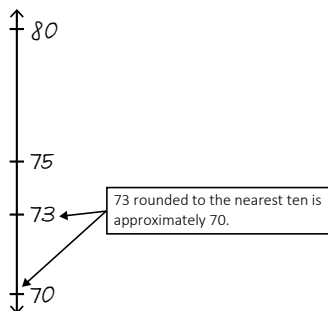
Compatible numbers

$$106 + 27 \approx 100 + 30$$

Expanded notation: an equation that is a sum of multiplication expressions, each representing the value of one digit as the product of that digit and a place value unit

Standard Notation	Expanded Notation
8,907	$(8 \times 1,000) + (9 \times 100) + (7 \times 1) = 8,907$

Round (*Redondear*): to approximate the value of a given number



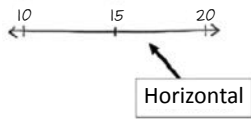
Standard algorithm (*Algoritmo estandar*): a systematic process for adding or subtracting numbers; in a standard algorithm, like units are added or subtracted one place value at a time

$$\begin{array}{r}
 3 \overline{) 403} \text{ L} \\
 - 185 \text{ L} \\
 \hline
 218 \text{ L}
 \end{array}$$

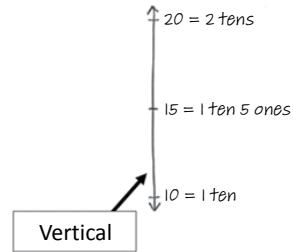


Models

Horizontal Number Line



Vertical Number Line



Place Value Chart

hundred thousands	ten thousands	thousands	hundreds	tens	ones



Grado 3 Módulo 2

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.2A, 3.2B, 3.2C, 3.2D, 3.4A, 3.4B, 3.5A, 3.7C, 3.7D, 3.7E**

El enfoque del Módulo 2 es explorar la medición del tiempo, el peso y el volumen líquido, y ampliar la comprensión del valor de posición a números de hasta el 100,000. Se espera que su estudiante:

- ☐ Resuelva problemas escritos que involucren la suma y resta de intervalos de tiempo.
- ☐ Mida el peso usando **libras** y **onzas** y mida el **volumen líquido** usando **galones, cuartos de galón, pintas, tazas, onzas líquidas, litros y mililitros**
- ☐ Resuelva problemas escritos que involucren el peso, el volumen líquido y la capacidad.
- ☐ Represente números hasta 100,000 en una tabla de valor de posición.
- ☐ Escriba números en forma unitaria, forma estandarizada, forma desarrollada, notación desarrollada y forma escrita.
- ☐ Compare números usando $<$, $>$ o $=$.
- ☐ Ordene números enteros usando el valor de posición y las rectas numéricas.
- ☐ **Redondee** los números a la decena y centena más cercana usando una recta numérica vertical.
- ☐ Estime sumas y restas redondeando o usando **números compatibles**.
- ☐ Sume y reste números de dos y tres dígitos usando el **algoritmo normal**.
- ☐ Resuelva problemas escritos de uno y dos pasos que involucren sumas y restas.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Registre la hora a la que su estudiante comienza una actividad a medida que avanza el día, como practicar un instrumento o leer. Dígale cuántos minutos debe durar la actividad. Pídale que averigüe qué hora será cuando termine la actividad.
- En la tienda, pida a su estudiante que use la báscula de alimentos en la sección de frutas y verduras. Pídale que adivine el peso (en libras u onzas) antes de poner un artículo en la báscula.
- Apoye a su estudiante mientras dibuja y etiqueta una tabla de valor de posición (hasta centenas de millar). Pídale que diga un número grande (hasta 100,000) y que represente el número en la tabla de valor de posición usando piezas de cereal como si fueran discos. Desafíense uno a otro a decir el nombre del número que se creó, usando las formas numéricas enumeradas anteriormente.



- Use una baraja de cartas (sin los 10 ni las figuras) para practicar la suma y la resta. Pida a su estudiante que voltee dos o tres cartas para crear un número de dos o tres dígitos, y luego pídale que voltee dos o tres cartas más para crear otro número. Pídale que encuentre la suma o la resta de los dos números. Asegúrese de restar el número más pequeño del número más grande.

Términos

Algoritmo normal: un proceso sistemático para sumar o restar números; en un algoritmo normal, las unidades iguales se suman o restan un valor de posición a la vez.

$$\begin{array}{r} 3 \cancel{10} 13 \\ 403 \text{ L} \\ - 185 \text{ L} \\ \hline 218 \text{ L} \end{array}$$

Capacidad: la cantidad de líquido que puede contener un recipiente.



Notación desarrollada: una ecuación que es una suma de expresiones de multiplicación, cada una de las cuales representa el valor de un dígito como el producto de ese dígito y una unidad de valor de posición.

notación estándar

8,907

notación expandida

$$(8 \times 1,000) + (9 \times 100) + (7 \times 1) = 8,907$$

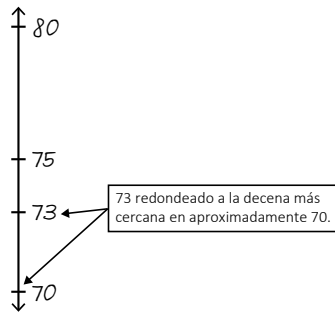
Números compatibles (*Compatible numbers*): números que hacen que los cálculos sean más eficientes al estimar soluciones; los números compatibles no son necesariamente los mismos números que se obtienen redondeando.

números compatibles

$$106 + 27 \approx 100 + 30$$

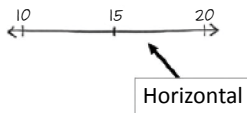


Redondear (Round): aproximar el valor de un número dado.



Modelos

Recta numérica horizontal



Recta numérica vertical

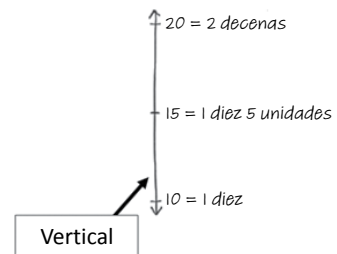


Tabla de valor de posición

centenas de millar	decenas de millar	unidades de millar	centenas	decenas	unidades



Grade 3 Module 3

Tips for Families

Key Concepts Overview

Focus TEKS: **3.2B, 3.4D, 3.4E, 3.4F, 3.4G, 3.4I, 3.4K, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E**

The focus of Module 3 is exploring multiplication and division with units of 0, 1, 6–9, and **multiples** of 10, multiplying two-digit numbers by one-digit numbers, and solving word problems. Your student will:

- ☐ Explore multiplication as a comparison of one quantity to another and determine how many times greater one quantity is than another by using strip diagrams.
- ☐ Use **input–output tables** to explore multiplication as a comparison. For example, if 2 items go into a box and 4 items come out, the number that comes out is 2 times as much as the number that goes in.
- ☐ Find the value of the unknown in simple equations and in word problems.
- ☐ Solve multiplication and division problems that use units of 0, 1, 6, 7, 8, and 9.
- ☐ Use parentheses to group numbers to make an easier problem.
- ☐ Use the Read–Draw–Write process to solve two-step word problems involving addition, subtraction, multiplication, and division.
- ☐ Use place value disks and a place value chart to solve multiplication problems.
- ☐ Multiply two-digit numbers by one-digit numbers by drawing models and by using the standard algorithm.
- ☐ Solve word problems that require multiplying two-digit numbers by one-digit numbers.

You can use the checklist above to help monitor your student’s progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Continue to practice multiplication and division, including all facts up to 9s, from memory. Focus on the problems that your student needs more practice with. Use car rides, shopping trips, or other “in-between” times to have her exercise her math muscles.
- Have your student use cereal, small candies, stickers, or small toys to construct an array that represents multiplying by 6, 7, 8, or 9, such as 9×2 . Then ask him to separate the array after the fifth column. Next ask him to write and solve two smaller multiplication problems that would show how many total objects are in the larger array. So $9 \times 2 = (5 \times 2) + (4 \times 2)$. $9 \times 2 = 10 + 8$. $9 \times 2 = 18$.
- Play a memory match game with multiplication and division. Use note cards or paper to make two sets of cards. On the cards, write the expression for multiplication and division facts that your student needs more practice with, but do not include the answer. Then make a second set of cards showing the answers that match the expressions. Lay the expression set of cards on one side and the answer set on the other side. Players take turns turning over two cards at a time to see whether the



cards match a multiplication or division fact with its correct answer. If no match is made, the cards are turned face down. If a match is made, the player keeps the two cards. For example, if your student turns over one card that shows 8×7 and another showing 63, a match was not made. She must turn the cards facedown because $8 \times 7 = 56$, not 63. However, if she turns over cards showing 9 and $63 \div 7$, she keeps both cards because 9 is the correct answer for the division expression. Continue until all the cards in the array have been matched. The player with the most cards at the end of the game is the winner.

Terms

Expression (*Expresión*): a number or any combination of sums, differences, products, or divisions of numbers that evaluates to a number (e.g., 4×3)

Multiple (*Múltiple*): the product of a given number and another whole number. The numbers said when skip-counting by a number are multiples of that number (e.g., Multiples of 6: $6 \rightarrow 12 \rightarrow 18 \rightarrow 24 \rightarrow 30 \rightarrow 36 \rightarrow 42$)

Number sentence: an equation or inequality for which both expressions are numerical and can be evaluated to a single number (e.g., $4 \times 3 = 12$)

Parentheses (*Paréntesis*): symbols for grouping and ordering expressions

$6 + 12 = 3 \text{ sixes}$ $(1 \times 6) + (2 \times 6) = 3 \text{ sixes}$ $(1 \times 6) + (2 \times 6) = 6 + \underline{12}$

Partial product (*Producto parcial*): one of the products resulting from one factor in a two-factor multiplication expression being decomposed and each part being multiplied by the other factor

$$\begin{array}{r}
 23 \\
 \times 3 \\
 \hline
 9 \leftarrow \text{partial product} \\
 + 60 \leftarrow \text{partial product} \\
 \hline
 69
 \end{array}$$

Product (*Producto*): the total when multiplying two or more numbers together



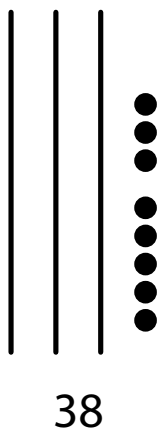
$$4 \times 2 = 8$$



product

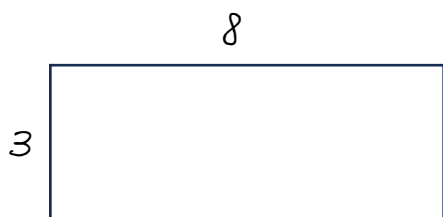


Value (*Valor*): the amount something is worth or represents



Models

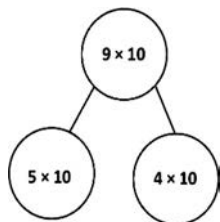
Area Model



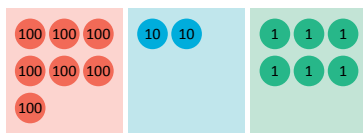
Input-Output Table

Input (Items Put into a Box)	Output (Items Taken Out of a Box)
2	4
10	20
8	16
3	6

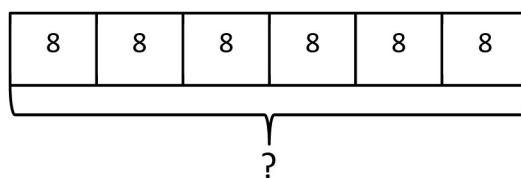
Number Bond



Place Value Disks



Strip Diagram



Grado 3 Módulo 3

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.2B, 3.4D, 3.4E, 3.4F, 3.4G, 3.4I, 3.4K, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E**

El enfoque del Módulo 3 es explorar la multiplicación y división con unidades de 0, 1, 6–9 y **múltiplos** de 10, multiplicando números de dos dígitos por números de un dígito y resolviendo problemas escritos. Se espera que su estudiante:

- ☐ Explore la multiplicación como una comparación de una cantidad con otra y determine cuántas veces mayor es una cantidad que otra mediante el uso de diagramas de tiras.
- ☐ Use **tablas de entrada-salida** para explorar la multiplicación como comparación. Por ejemplo, si 2 artículos entran en una caja y salen 4 artículos, el número que sale es 2 veces más que el número que entra.
- ☐ Encuentre el valor desconocido en ecuaciones simples y en problemas de palabras.
- ☐ Resuelva problemas de multiplicación y división que usen unidades de 0, 1, 6, 7, 8 y 9.
- ☐ Use paréntesis para agrupar números para hacer el problema más fácil.
- ☐ Use el proceso de Lee-Dibuja-Escribe para resolver problemas escritos de dos pasos que involucren suma, resta, multiplicación y división.
- ☐ Use discos de valor de posición y una tabla de valor de posición para resolver problemas de multiplicación.
- ☐ Multiplique números de dos dígitos por números de un dígito dibujando modelos y usando el algoritmo normal.
- ☐ Resuelva problemas escritos que requieran multiplicar números de dos dígitos por números de un dígito.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Continúe practicando la multiplicación y la división, incluyendo todas las operaciones hasta los 9, de memoria. Concéntrese en los problemas con los que su estudiante necesita más práctica. Use viajes en carro, viajes de compras u otros momentos "intermedios" para que ejercite sus músculos matemáticos.
- Pida a su estudiante que use cereales, dulces pequeños, pegatinas o juguetes pequeños para construir una matriz que represente multiplicar por 6, 7, 8 o 9, como 9×2 . Luego, pídale que separe la matriz después de la quinta columna. Después, pídale que escriba y resuelva dos problemas de multiplicación más pequeños que mostrarían cuántos objetos en total hay en la matriz más grande. Así que $9 \times 2 = (5 \times 2) + (4 \times 2)$. $9 \times 2 = 10 + 8$. $9 \times 2 = 18$.



- Juegue un juego de memoria con multiplicación y división. Use tarjetas de notas o papel para hacer dos juegos de tarjetas. En las tarjetas, escriba la expresión de las operaciones de multiplicación y división con la que su estudiante necesita más práctica, pero no incluya la respuesta. Luego, haga un segundo juego de tarjetas que muestren las respuestas que correspondan con las expresiones. Coloque el juego de tarjetas de expresión en un lado y el juego de tarjetas de respuestas en el otro lado. Los jugadores se turnan para voltear dos tarjetas a la vez para ver si las tarjetas relacionan una multiplicación o división con su respuesta correcta. Si las tarjetas no corresponden, se ponen boca abajo. Si las tarjetas corresponden, el jugador se queda con las dos tarjetas. Por ejemplo, si su estudiante voltear una tarjeta que muestra 8×7 y otra que muestra 63, las tarjetas no corresponden. Debe ponerlas boca abajo porque $8 \times 7 = 56$, no 63. Sin embargo, si voltear dos tarjetas que muestran 9 y $63 \div 7$, se queda con ambas tarjetas porque 9 es la respuesta correcta para la expresión de división. Continúe hasta que todas las tarjetas de la matriz se hayan relacionado. El jugador con más cartas al final del juego es el ganador.

Términos

Expresión (Expression): un número o cualquier combinación de sumas, restas, productos o divisiones de números que se evalúa como un número (p. ej., 4×3).

Múltiple (Multiple): el producto de un número dado y otro número entero. Los números que se dicen cuando se cuenta saltando números por un número son múltiplos de ese número (p. ej., múltiplos de 6: $6 \rightarrow 12 \rightarrow 18 \rightarrow 24 \rightarrow 30 \rightarrow 36 \rightarrow 42$).

Oración numérica: una ecuación o desigualdad para la cual ambas expresiones son numéricas y se pueden evaluar como un solo número (p. ej., $4 \times 3 = 12$).

Paréntesis (Parentheses): símbolos para agrupar y ordenar expresiones.

$6 + 12 = 3 \text{ seises}$ $(1 \times 6) + (2 \times 6) = 3 \text{ seises}$ $(1 \times 6) + (2 \times 6) = 6 + \underline{12}$

Producto (Product): el total al multiplicar dos o más números.



$$4 \times 2 = 8$$

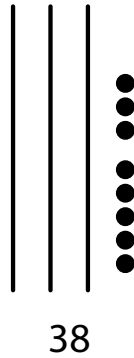
↑
producto

Producto parcial (Partial product): uno de los productos que resulta de la descomposición de un factor en una expresión de multiplicación de dos factores y de la multiplicación de cada parte por el otro factor.

$$\begin{array}{r}
 23 \\
 \times 3 \\
 \hline
 9 \leftarrow \text{producto parcial} \\
 + 60 \leftarrow \text{producto parcial} \\
 \hline
 69
 \end{array}$$



Valor (*Value*): la cantidad que algo vale o representa.



Modelos

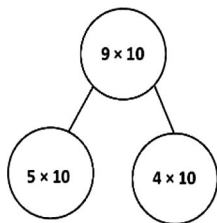
Modelo del área



Tabla de entrada-salida

Entrada (artículos que entran en una caja)	Salida (artículos que salen de una caja)
2	4
10	20
8	16
3	6

Vínculo numérico



Discos de valor de posición

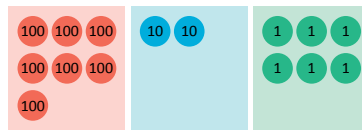
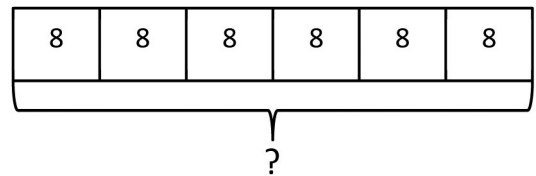


Diagrama de tiras



Grade 3 Module 4

Tips for Families

Key Concepts Overview

Focus TEKS: **3.6C, 3.6D**

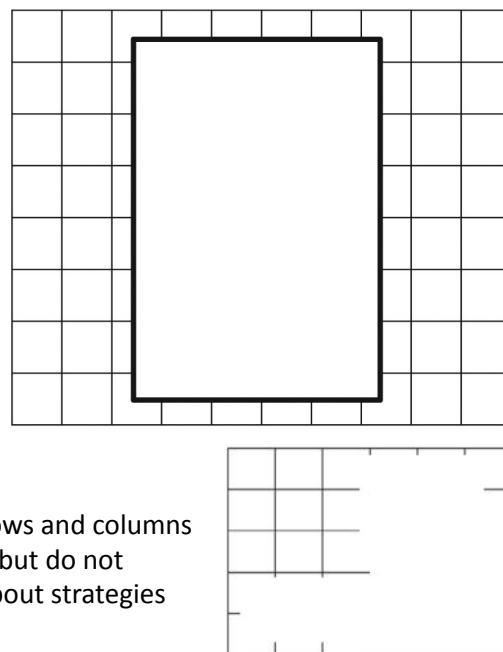
The focus of Module 4 is exploring area as an attribute of two-dimensional figures and relating it to prior understandings of multiplication. Your student will:

- ☐ Label the side lengths of rectangles based on the number of square tiles shown.
- ☐ Skip-count to find the unknown **area** and write **multiplication** sentences that describe an **array**.
- ☐ Find the unknown side **length** when given the area and one side length of a rectangle.
- ☐ Draw rows and columns to determine the area of a rectangle given an incomplete array.
- ☐ Use multiplication to determine the area of a rectangle.
- ☐ Break apart rectangles and reconnect the pieces to form new rectangles, showing that the areas are still the same.
- ☐ Find the total area of combined rectangles when given the dimensions of some of the side lengths.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

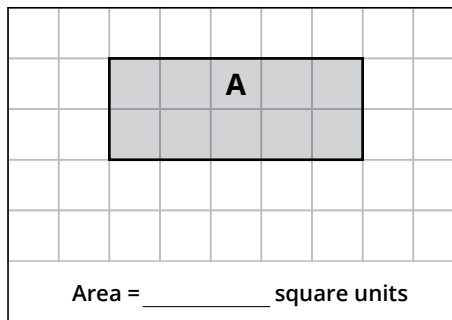
- Cut out a rectangle from a piece of graph paper. (There is free printable graph paper online or ask your student's teacher for some.) Use sticky notes to cover up part of the rectangle. Ask your student to find the area of the entire rectangle without removing the sticky note. Students can look at the part of the grid paper not covered by the rectangle to determine the number of columns and rows the sticky note is covering.
- If you have a floor with square tiles, use painter's tape to mark off a rectangular area. Cover part of the taped-off area with a towel or rug. Ask your student to find out how many tiles are in the taped-off area without moving the towel or rug.
- Draw a rectangle on paper. Use a ruler to begin drawing rows and columns inside the rectangle to create a grid of squares, as shown, but do not complete it. Ask your student to complete the grid. Talk about strategies that would work to complete the array.



- Give your student some graph paper. Ask her to design a public place of her choice by using rectangles. She might choose to design a skate park, a mall, a community garden, or whatever else sparks her imagination. Help her determine the side lengths of the rectangles and calculate the area of the design.

Terms

Area (*Área*): the measurement attribute that describes the number of unit squares (or square units) a figure or region covers



Commutative property of multiplication (*Propiedad conmutativa*): changing the order of the factors in a multiplication expression or equation does not change its product

$$4 \times 2 = 8$$

$$2 \times 4 = 8$$

Distribute (*Distribuir*): to multiply each part of a decomposed factor by the other factor, or to divide each part of a decomposed total by the divisor

$$6 \times 4 = \underline{\hspace{2cm}}$$

$$(5 \times 4) = 20$$

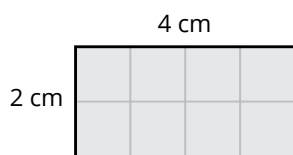
$$(1 \times 4) = 4$$

$$(6 \times 4) = (5 \times 4) + (1 \times 4)$$

$$= 20 + 4$$

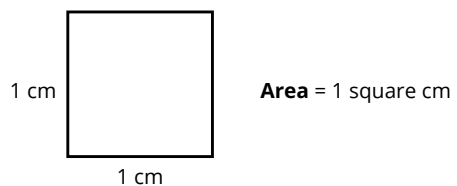


Length: the distance measurement between two points



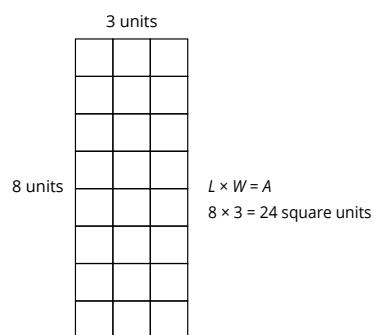
The side lengths of the rectangle are 2 cm and 4 cm.

Square unit: a unit of area in the shape of a square that has side lengths of 1 unit

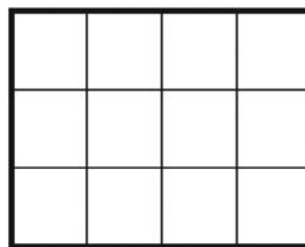


Models

Area Model



Array



Grado 3 Módulo 4

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.6C, 3.6D**

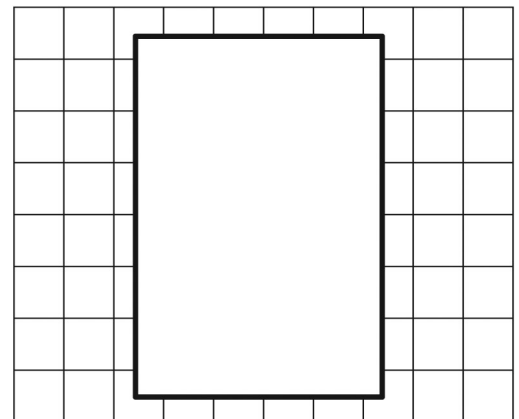
El enfoque del Módulo 4 es explorar el área como un atributo de las figuras de dos dimensiones relacionándola con la comprensión previa de la multiplicación. Se espera que su estudiante:

- ☐ Etiquete las longitudes de los lados de los rectángulos según el número de mosaicos cuadrados que se muestran.
- ☐ Cuento saltando números para encontrar el **área** desconocida y escriba oraciones **de multiplicación** que describan una **matriz**.
- ☐ Encuentre la **longitud** del lado desconocido cuando se le da el área y una longitud de lado de un rectángulo.
- ☐ Dibuje filas y columnas para determinar el área de un rectángulo dada una matriz incompleta.
- ☐ Use la multiplicación para determinar el área de un rectángulo.
- ☐ Divida rectángulos y reconecte las partes para formar nuevos rectángulos, mostrando que las áreas siguen siendo las mismas.
- ☐ Encuentre el área total de los rectángulos combinados dadas las dimensiones de algunas de las longitudes de los lados.

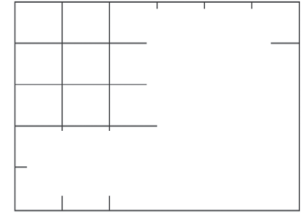
Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Recorte un rectángulo de una hoja de papel cuadriculado. (Hay papel cuadriculado imprimible gratuito en línea o lo puede pedir al maestro de su estudiante). Use notas adhesivas para cubrir una parte del rectángulo. Pídale a su estudiante que encuentre el área de todo el rectángulo sin quitar la nota adhesiva. Los estudiantes pueden mirar la parte del papel cuadriculado que no está cubierta por el rectángulo para determinar el número de columnas y filas que cubre la nota adhesiva.
- Si tiene un piso con mosaicos cuadrados, use cinta adhesiva de pintar para delimitar un área rectangular. Cubra parte del área delimitada con cinta usando una toalla o un tapete. Pida a su estudiante que averigüe cuántos mosaicos hay en el área delimitada con cinta sin mover la toalla o el tapete.

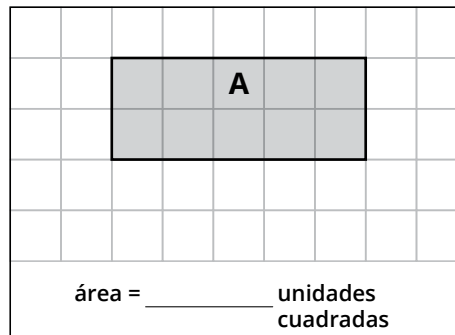


- Dibuje un rectángulo en una hoja de papel. Use una regla para comenzar a dibujar filas y columnas dentro del rectángulo para crear una cuadrícula de cuadrados, como se muestra, pero no la complete. Pida a su estudiante que complete la cuadrícula. Hablen sobre las estrategias que funcionarían para completar la matriz.
- Entregue a su estudiante una hoja de papel cuadrículado. Pídale que diseñe un lugar público de su elección usando rectángulos. Podría optar por diseñar un parque de patinaje, un centro comercial, un jardín comunitario o cualquier otra cosa que despierte su imaginación. Ayúdele a determinar las longitudes de los lados de los rectángulos y a calcular el área del diseño.



Términos

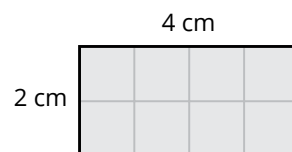
Área (Area): el atributo de medición que describe el número de cuadrados unitarios (o unidades cuadradas) que cubre una figura o región.



Distribuir (Distribute): multiplicar cada parte de un factor descompuesto por el otro factor o dividir cada parte de un entero descompuesto entre el divisor.

$$\begin{array}{r}
 6 \times 4 = \underline{\quad} \\
 \begin{array}{cccc}
 \bigcirc & \bigcirc & \bigcirc & \bigcirc \\
 \bigcirc & \bigcirc & \bigcirc & \bigcirc \\
 \bigcirc & \bigcirc & \bigcirc & \bigcirc \\
 \bigcirc & \bigcirc & \bigcirc & \bigcirc \\
 \bigcirc & \bigcirc & \bigcirc & \bigcirc
 \end{array} \\
 \begin{array}{r}
 (5 \times 4) = 20 \\
 \hline
 \begin{array}{cccc}
 \bigcirc & \bigcirc & \bigcirc & \bigcirc
 \end{array} \\
 (1 \times 4) = 4 \\
 \hline
 (6 \times 4) = (5 \times 4) + (1 \times 4) \\
 = 20 + 4
 \end{array}
 \end{array}$$

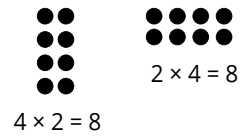
Longitud: la medida de la distancia entre dos puntos.



Las longitudes de los lados del rectángulo son de 2 cm y 4 cm



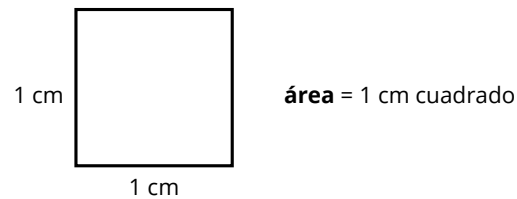
Propiedad conmutativa (*Commutative property*): cambiar el orden de los factores en una expresión o ecuación de multiplicación no cambia su producto.



$$4 \times 2 = 8$$

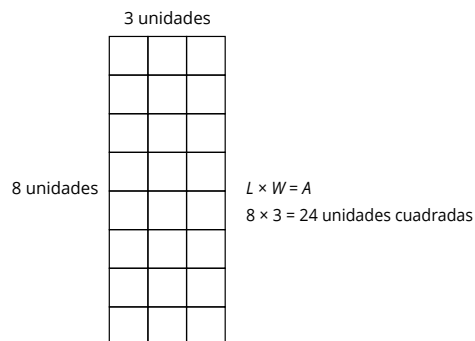
$$2 \times 4 = 8$$

Unidad cuadrada: una unidad de área en forma de cuadrado que tiene longitudes de lado de 1 unidad.

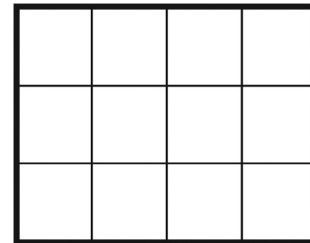


Modelos

Modelo de área



Matriz



Grade 3 Module 5

Tips for Families

Key Concepts Overview

Focus TEKS: **3.3A, 3.3B, 3.3C, 3.3D, 3.3E, 3.3F, 3.3G, 3.3H, 3.6E, 3.7A**

The focus of Module 5 is extending and deepening prior knowledge of fractions as equal partitions of a whole to fractions as numbers on a number line. Your student will:

- ☐ Partition a line or shape into equal parts and name the **fractional units**.
- ☐ Represent **unit fractions** in multiple ways.
- ☐ Write a fraction as a sum of unit fractions.
- ☐ Shade and compare fractional amounts using models.
- ☐ Locate and label fractions on a number line.
- ☐ Use a number line to compare fractions by reasoning about the distance of the fraction from zero and from other fractions.
- ☐ Use drawings and number lines to determine whether two fractional amounts are **equivalent**.
- ☐ Complete given fractions to make equivalent fractions (e.g., $\frac{1}{2} = \frac{2}{4}$).
- ☐ Show equivalent fractions on a number line.
- ☐ Draw a model to compare fractions in word problems.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Tape a string across a doorway so your student can reach it. Make sure the string is taut and parallel with the floor (not slanted). Using the door frame as the endpoints of the string, ask your student to show where to partition the string with clothespins to create different fractional units such as halves, thirds, fourths, sixths, or eighths. Alternatively, he can thread O-shaped cereal or beads on the string before you tape it to the door frame, and then slide the beads or cereal into place based on fractional units you suggest.
- Give your student some measuring cups, several containers, such as bowls or glasses that are exactly the same size, and a pitcher of water. Ask questions like, "Which contains more water, 2 one-third cups or 2 one-fourth cups?" Have her fill the measuring cups with water and then pour it into the containers to compare the amounts of water side by side. Talk about why one container has more water even though she added 2 units of water to each container.
- Invite your student to watch you chop vegetables or fruit while you are preparing a meal. Talk about fractions while you work. For example, if you are cutting up two carrots that are the same size, cut one into fourths and the other into sixths, and ask whether 3 fourths or 3 sixths is more.



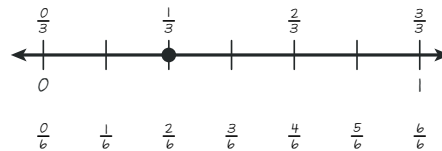
Terms

Equivalent fractions (*Fracciones equivalentes*): fractions that name the same size or the same point on the number line



4 sixths is equal to 2 thirds.

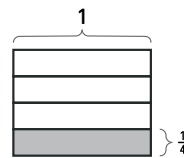
$$\frac{4}{6} = \frac{2}{3}$$



$$\frac{1}{3} = \frac{2}{6}$$

Fractional unit (*Unidad de fracción*): a unit created by partitioning a whole into a number of equal parts (half, third, fourth, etc.)

The fractional unit is fourths.
The whole is divided into four equal parts.



Non-Unit fraction: a fraction with a numerator other than 1 (e.g., $\frac{2}{3}$, $\frac{3}{5}$, $\frac{7}{8}$)

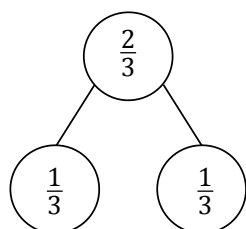
Unit form (*Forma unitaria*): a representation of a fraction using the number of equal parts that are selected and the fractional unit (e.g., 1 half, 2 thirds, 4 fifths)

Unit fraction (*Fracción unitaria*): a fraction with a numerator of 1 (e.g., $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$)

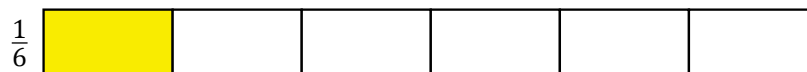


Models

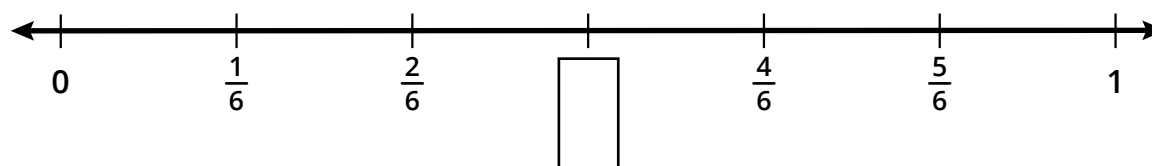
Number Bond



Fraction Strip/Strip Diagram



Number Line



Grado 3 Módulo 5

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.3A, 3.3B, 3.3C, 3.3D, 3.3E, 3.3F, 3.3G, 3.3H, 3.6E, 3.7A**

El enfoque del Módulo 5 es ampliar y profundizar el conocimiento previo de fracciones como partes iguales de un entero a fracciones como números en una recta numérica. Se espera que su estudiante:

- ☐ Divida una línea o figura en partes iguales y nombre las **unidades fraccionarias**.
- ☐ Represente **fracciones unitarias** varias maneras.
- ☐ Escriba una fracción como la suma de fracciones unitarias.
- ☐ Sombrearé y comparará cantidades fraccionarias usando modelos.
- ☐ Ubique y etiquete fracciones en una recta numérica.
- ☐ Use una recta numérica para comparar fracciones razonando sobre la distancia de la fracción a cero y a otras fracciones.
- ☐ Use dibujos y rectas numéricas para determinar si dos cantidades fraccionarias son **equivalentes**.
- ☐ Complete fracciones dadas para hacer fracciones equivalentes $\left(\text{por ejemplo, } \frac{1}{2} = \frac{2}{4}\right)$.
- ☐ Muestre fracciones equivalentes en una recta numérica.
- ☐ Dibuje un modelo para comparar fracciones en problemas escritos.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Pegue con cinta adhesiva una cuerda de lado a lado de una puerta para que su estudiante pueda alcanzarla. Asegúrese de que la cuerda esté tensa y paralela al suelo (no inclinada). Usando el marco de la puerta como extremos de la cuerda, pida a su estudiante que muestre dónde dividir la cuerda con pinzas para la ropa para crear diferentes unidades fraccionarias como mitades, tercios, cuartos, sextos u octavos. Alternativamente, puede enhebrar cereal o cuentas en forma de O en la cuerda antes de pegarla en el marco de la puerta y luego deslizar las cuentas o el cereal en su lugar según las unidades fraccionarias que sugiera.
- Entregue a su estudiante algunas tazas medidoras, varios recipientes, como tazones o vasos que sean exactamente del mismo tamaño, y una jarra de agua. Haga preguntas como: "¿Qué contiene más agua, 2 tazas de un tercio o 2 tazas de un cuarto?". Pídale que llene las tazas medidoras con agua y luego la vierta en los recipientes para comparar las cantidades de agua una junto a la otra. Hablen sobre por qué un recipiente tiene más agua a pesar de que agregó 2 unidades de agua a cada recipiente.



- Invite a su estudiante a ver cómo corta verduras o frutas mientras prepara una comida. Hablen de fracciones mientras trabajan. Por ejemplo, si va a cortar dos zanahorias del mismo tamaño, corte una en cuartos y la otra en sextos, y pregunte si 3 cuartos o 3 sextos es más

Términos

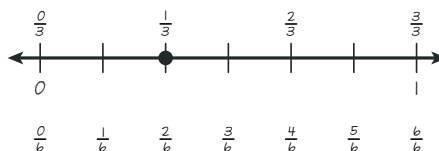
Forma unitaria (*Unit form*): representación de una fracción usando el número de partes iguales seleccionadas y la unidad fraccionaria (p. ej., 1 mitad, 2 tercios, 4 quintos).

Fracciones equivalentes (*equivalent fractions*): fracciones que tienen el mismo tamaño o punto en la recta numérica.



4 sextos es igual a 2 tercios.

$$\frac{4}{6} = \frac{2}{3}$$



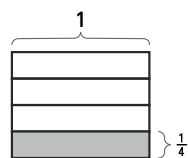
$$\frac{1}{3} = \frac{2}{6}$$

Fracción no unitaria: fracción con un numerador distinto de 1 (por ejemplo, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{7}{8}$)

Fracción unitaria (*Unit fraction*): una fracción con un numerador de 1 (por ejemplo, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$)

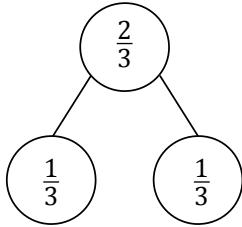
Unidad de fracción (*Fractional unit*): unidad creada mediante la división de un entero en varias partes iguales (mitades, tercios, cuartos, etc.)

La unidad fraccionaria es el cuarto. El entero se divide en cuatro partes iguales.



Modelos

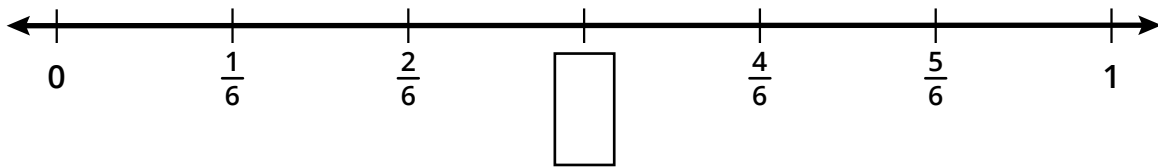
Vínculo numérico



Tiras de fracciones/Diagrama de tiras



Recta numérica



Grade 3 Module 6

Tips for Families

Key Concepts Overview

Focus TEKS: **3.4C, 3.5E, 3.8A, 3.8B, 3.9A, 3.9B, 3.9C, 3.9D, 3.9E, 3.9F**

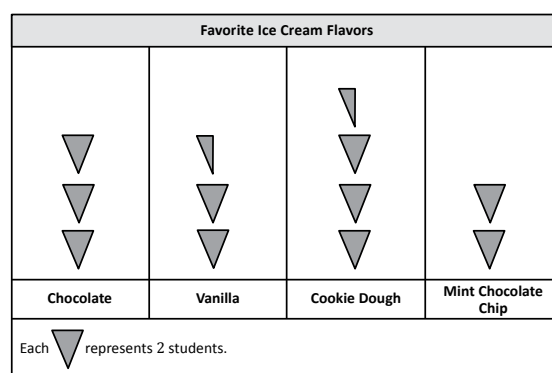
The focus of Module 6 is exploring financial literacy and building on previous knowledge of data and graphing. Your student will:

- ☐ Find the value of a collection of coins and bills.
- ☐ Explore different professions and their salaries.
- ☐ Use the words *supply* and *demand* to explain how these concepts affect price.
- ☐ Solve real-world problems related to saving money for a purchase.
- ☐ Use the words *borrow* and *interest* to solve real-world problems.
- ☐ Create pictographs, **scaled bar graphs**, and **dot plots** by using given data sets and answer questions about the data.
- ☐ Solve one- and two-step word problems by using data displayed in pictographs, bar graphs, and dot plots.
- ☐ Analyze and create patterns and relationships between pairs of numbers in a table.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Play the Money Scavenger Hunt game.
 1. Hide coins and/or bills around the room. You can use real money or play money.
 2. Tell your student how many coins and/or bills are hidden around the room. Then have him find the coins and/or bills.
 3. After your student finds all the coins and/or bills, have him add to determine the total value of the money.
- Help your student create a pictograph to hang on the wall or refrigerator. Ask her to come up with a daily (or almost daily) activity, such as reading, playing sports, or practicing a musical instrument. Record the number of minutes, in 5-minute intervals, that she spends daily on the activity by using stickers on a handmade grid or drawing symbols such as stars in the boxes on grid paper. Help her create a key for the pictograph that shows what each sticker or symbol represents (e.g., 1 sticker represents 5 minutes).

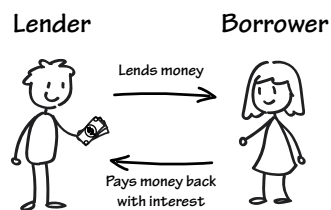


For example, your student could record how many minutes she reads each day (see image). Since each sticker represents 5 minutes, she would put 3 stickers above Tuesday to show that she read for 15 minutes that day.

Variation: Use interlocking blocks to represent a bar graph. Determine the value of each block (e.g., 1 block represents 5 minutes), and stack the blocks to show the total time spent on an activity. Display the stacks in an area where your student will see them often as a reminder of her accomplishments.

Terms

Borrower: a person who takes something from someone else with the intention of returning it

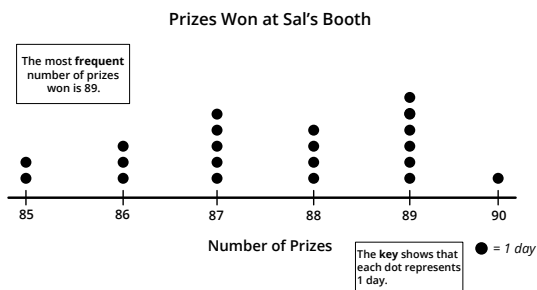


Credit (*Crédito*): buying or obtaining goods and services now with an agreement to pay in the future

Frequency table (*Tabla de frecuencia*): a table that lists items and shows the number of times each item occurs

Classroom	Mr. Franklin	Mrs. Curie	Mr. Nye	Mrs. Nobel
Number of Crayfish	21	23	?	24

Frequent (*Frecuente*): common, e.g., the most common measurement on a dot plot

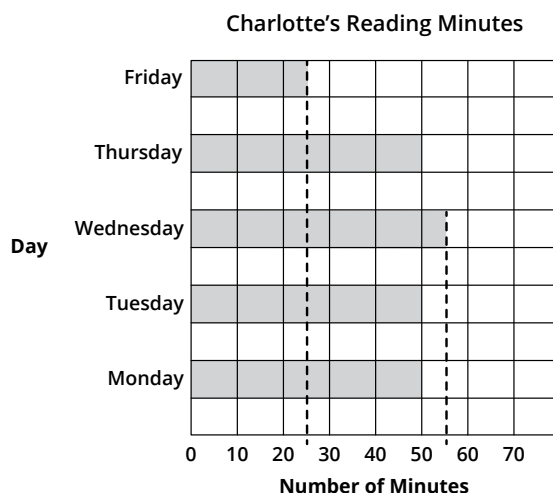


Income: money earned for working and money received for the sale of goods or property



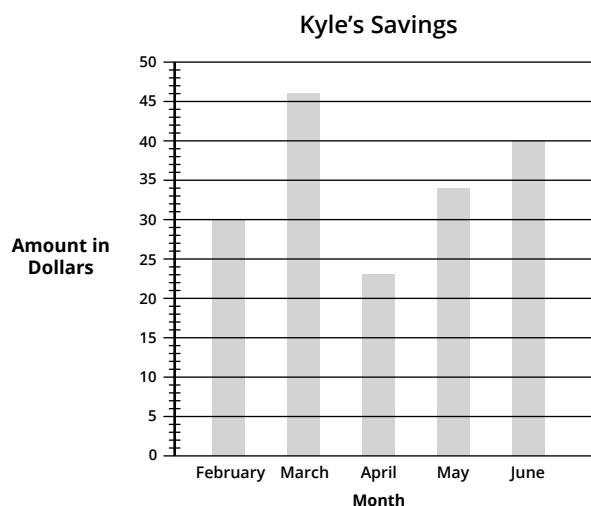
Interest (*Interés*): money paid for borrowing money or making purchases on credit

Scaled graph (*Gráfico escalado*): a bar graph or pictograph with a scale that uses units with a value greater than 1

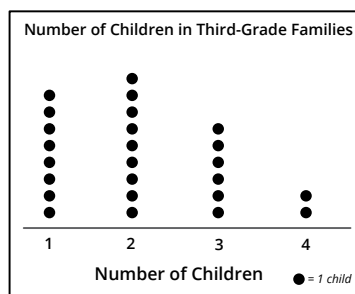


Models

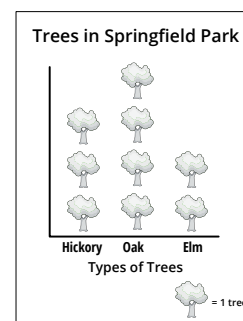
Bar Graph



Dot Plot



Pictograph



Grado 3 Módulo 6

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.4C, 3.5E, 3.8A, 3.8B, 3.9A, 3.9B, 3.9C, 3.9D, 3.9E, 3.9F**

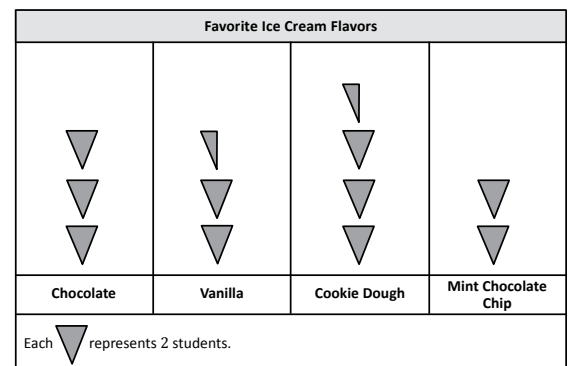
El enfoque del Módulo 6 es explorar la comprensión de finanzas y desarrollar el conocimiento previo de datos y gráficas. Se espera que su estudiante:

- ☐ Encuentre el valor de una colección de monedas y billetes.
- ☐ Explore diferentes profesiones y sus salarios.
- ☐ Use las palabras *oferta* y *demanda* para explicar cómo estos conceptos afectan al precio.
- ☐ Resuelva problemas del mundo real relacionados con ahorrar dinero para una compra.
- ☐ Use las palabras *préstamo* e *interés* para resolver problemas del mundo real.
- ☐ Cree pictografías, **gráficas de barras a escala** y **diagramas de puntos** usando conjuntos de datos dados y conteste preguntas sobre los datos.
- ☐ Resuelva problemas escritos de uno y dos pasos usando los datos que se muestran en pictografías, gráficas de barras y diagramas de puntos.
- ☐ Analice y cree patrones y relaciones entre pares de números en una tabla.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Juega el juego Búsqueda del dinero.
 1. Esconda monedas y/o billetes por el cuarto. Puede usar dinero real o dinero de juguete.
 2. Diga a su estudiante cuántas monedas y/o billetes están escondidos en el cuarto. Luego, pídale que busque las monedas y/o los billetes.
 3. Después de que su estudiante encuentre todas las monedas y/o billetes, pídale que sume para determinar el valor total del dinero.
- Ayude a su estudiante a crear una pictografía para colgar en la pared o el refrigerador. Pídale que invente una actividad diaria (o casi diaria), como leer, practicar deportes o practicar un instrumento musical. Registre el número de minutos, en intervalos de 5 minutos, que dedica diariamente a la actividad usando pegatinas



en una cuadrícula hecha a mano o símbolos dibujados como estrellas en los cuadros del papel cuadriculado. Ayúdele a crear una clave para la pictografía que muestre lo que representa cada pegatina o símbolo (p. ej., 1 pegatina representa 5 minutos).

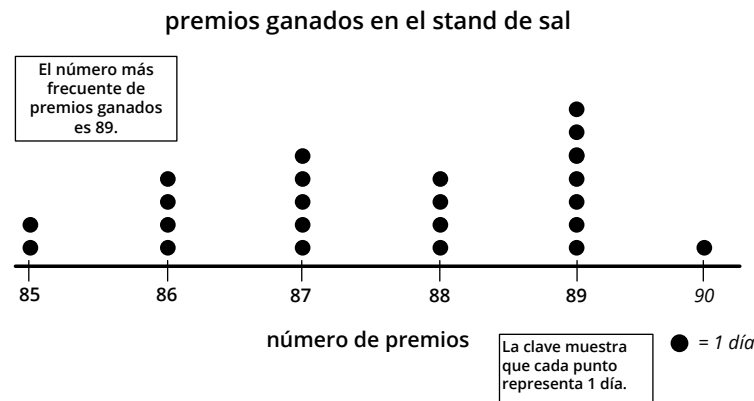
Por ejemplo, su estudiante podría anotar cuántos minutos lee cada día (ver imagen). Dado que cada pegatina representa 5 minutos, se pondrían 3 pegatinas en el martes para mostrar que leyó por 15 minutos ese día.

Variación: Use bloques conectables para representar una gráfica de barras. Determine el valor de cada bloque. (p. ej., 1 bloque representa 5 minutos) y apile los bloques para mostrar el tiempo total dedicado a una actividad. Coloque las pilas de bloques en un área donde su estudiante las vea con frecuencia como un recordatorio de sus logros.

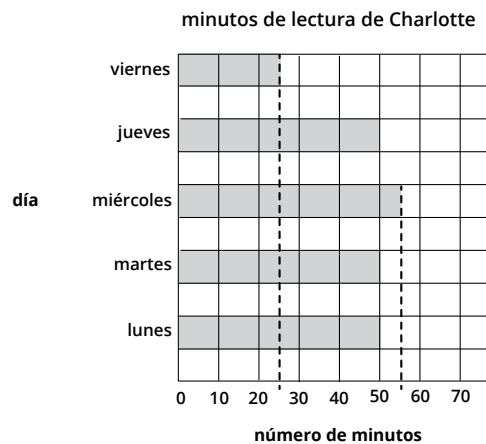
Términos

Crédito (*Credit*): comprar u obtener bienes y servicios ahora con un acuerdo de pago en el futuro.

Frecuente (*Frequent*): común, por ejemplo, la medición más común en una gráfica de puntos.



Gráfica escalada (*Scaled Graph*): una gráfica de barras o pictografía con una escala que usa unidades con un valor mayor que 1.



Ingresos: dinero ganado por trabajar y dinero recibido por la venta de bienes o propiedades.



Interés (Interest): dinero que se paga por pedir prestado dinero o hacer compras a crédito.

Prestatario: una persona que toma algo de otra persona con la intención de devolverlo.



Tabla de frecuencia: una tabla que enumera los elementos y muestra el número de veces que aparece cada elemento.

salón de clases	sr. Franklin	sra. Curie	sr. Nye	sra. Nobel
número de cangrejos de río	21	23	?	24

Modelos

Gráfica de barras

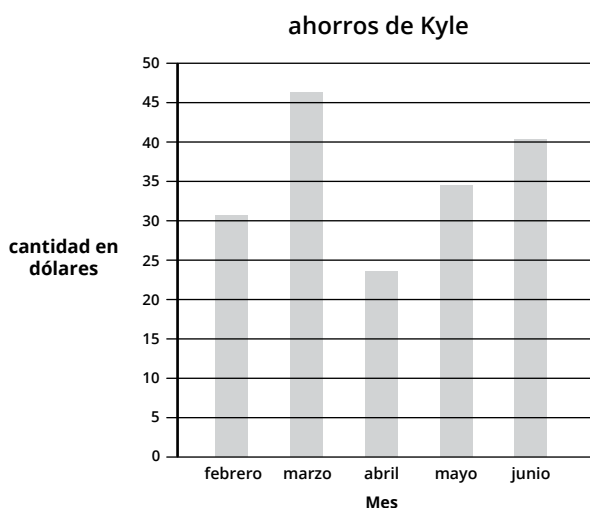
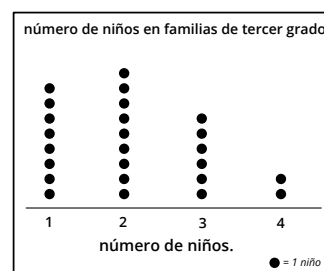
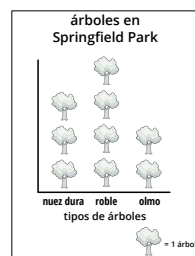


Diagrama de puntos



Pictografía



Grade 3 Module 7

Tips for Families

Key Concepts Overview

Focus TEKS: **3.4K, 3.5A, 3.5B, 3.6A, 3.6B, 3.7B**

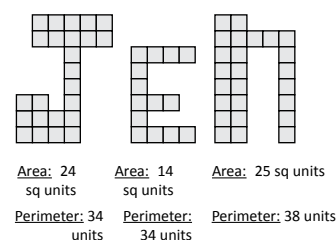
The focus of Module 7 is practicing with word problems and investigating geometry and perimeter. Your student will:

- ☐ Solve a variety of one- and two-step word problems involving addition, subtraction, multiplication, and/or division by using the Read–Draw–Write (RDW) process.
- ☐ Identify polygons based on their attributes.
- ☐ Use a ruler and a right angle tool to draw figures with given attributes.
- ☐ Classify and sort two- and three-dimensional figures according to their attributes (e.g., faces, edges, vertices).
- ☐ Identify **perimeter** and distinguish it from the area of a shape.
- ☐ Trace around shapes to conceptually understand perimeter.
- ☐ Measure and label side lengths to calculate the perimeter of given shapes.
- ☐ Determine the perimeters of irregular shapes made up of several rectangles and of **regular polygons** that have unknown measurements.
- ☐ Compare, analyze, and draw conclusions about the perimeters and areas of different rectangles.
- ☐ Create and analyze dot plots.
- ☐ Solve word problems involving area and perimeter.
- ☐ Determine both the area and perimeter when given a model or a word problem.

You can use the checklist above to help monitor your student’s progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Have your student act out word problems before solving. For example, if the problem is about money, use play or real money to physically act out what is happening in the word problem. If it is about pouring water into beakers, set out some containers that would simulate the word problem, and let him pour water into the containers according to what happens in the problem. After acting out the problem, he can complete the RDW process.
- With your student, use a measuring tape to practice measuring the perimeters of objects in your daily life such as a tabletop or desktop,



Total Area of my Name: 63 square units	24	34
	14	30
Total Perimeter of my Name: 102 units	+ 25	+ 38
	63	102

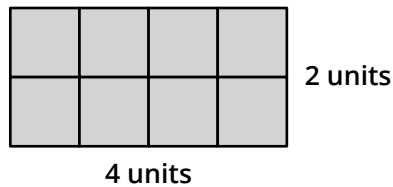


the floor of a small room, or a toy box. Talk about which units are best for measuring different perimeters (e.g., inches to measure a toy box, feet to measure the floor in a room).

- Ask your student's teacher for or search online for printable grid paper. Have your student use crayons or markers to construct her name on the grid paper and find the area and perimeter of each letter (see image). Then have her find the total area and total perimeter of her name. Your student could then repeat the activity using other names.

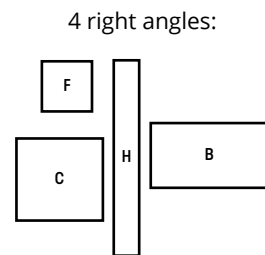
Terms

Area (*Área*): the amount of two-dimensional space in a bounded region

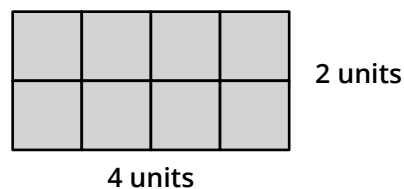


The area of this rectangle is 8 square units.

Attribute (*Atributo*): any defining or non-defining characteristics of a shape, including properties (e.g., straight sides, the color blue)



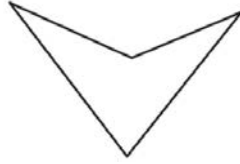
Perimeter (*Perímetro*): the boundary or length of the boundary of a two-dimensional shape



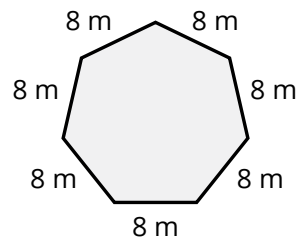
The perimeter of this rectangle is 12 units.



Polygon (*Polígono*): a closed figure with three or more straight sides (e.g., triangle, quadrilateral, pentagon, hexagon)

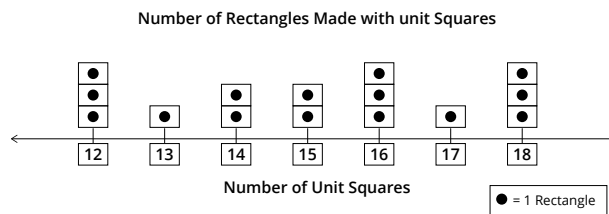


Regular polygon (*Polígono regular*): a polygon with equal side lengths and interior angles



Models

Dot Plot



Grado 3 Módulo 7

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **3.4K, 3.5A, 3.5B, 3.6A, 3.6B, 3.7B**

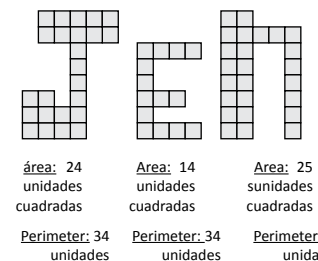
El enfoque del Módulo 7 es practicar con problemas escritos e investigar la geometría y el perímetro. Se espera que su estudiante:

- ☐ Resuelva una variedad de problemas escritos de uno y dos pasos que involucren suma, resta, multiplicación y/o división usando el proceso de Leer, Dibuja y Escribe (LDE).
- ☐ Identifique los polígonos según sus atributos.
- ☐ Use una regla y una escuadra para dibujar figuras con atributos dados.
- ☐ Clasifique y ordene figuras de dos dimensiones y de tres dimensiones de acuerdo con sus atributos (p. ej., caras, aristas, vértices).
- ☐ Identifique **el perímetro** y lo distinga del área de una figura.
- ☐ Dibuje figuras para comprender conceptualmente el perímetro.
- ☐ Mida y etiquete las longitudes de los lados para calcular el perímetro de las figuras dadas.
- ☐ Determine los perímetros de figuras irregulares formadas por varios rectángulos y por **polígonos regulares** que tengan medidas desconocidas.
- ☐ Compare, analice y saque conclusiones sobre los perímetros y áreas de diferentes rectángulos.
- ☐ Cree y analice diagramas de puntos.
- ☐ Resuelva problemas escritos que involucren área y perímetro.
- ☐ Determine tanto el área como el perímetro cuando se le da un modelo o un problema escrito.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Pida a su estudiante que represente problemas escritos antes de resolverlos. Por ejemplo, si el problema es acerca de dinero, use el dinero para jugar o dinero real para representar físicamente lo que está sucediendo en el problema. Si se trata de verter agua en vasos de precipitados, coloque algunos recipientes que simulen el problema y deje que vierta agua en los recipientes de acuerdo con lo que suceda en el problema. Después de resolver el problema, puede completar el proceso LDE.



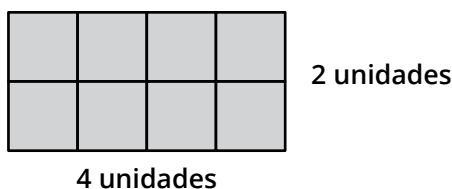
área total de mi nombre: 63 unidades cuadradas	24	34
	14	30
	+ 25	+ 38
perímetro total de mi nombre: 102 unidades	63	102



- Con su estudiante, use una cinta métrica para practicar la medición perímetros de objetos diarios, como una mesa o un escritorio, el piso de una habitación pequeña, o una caja de juguetes. Hable sobre qué unidades son las mejores para medir diferentes parámetros (p. ej., pulgadas para medir una caja de juguetes, pies para medir el piso de una habitación).
- Pregunte al maestro de su estudiante o busque en línea papel cuadriculado imprimible. Pida a su estudiante que use crayones o marcadores para construir su nombre en el papel cuadriculado y encontrar el área y el perímetro de cada letra (ver imagen). Luego, pídale que encuentre el área total y el perímetro total de su nombre. Después, el estudiante podría repetir la actividad usando otros nombres

Términos

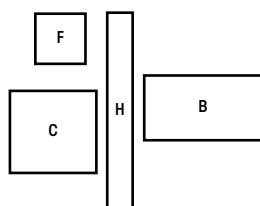
Área (Area): la cantidad de espacio de dos dimensiones en una región delimitada.



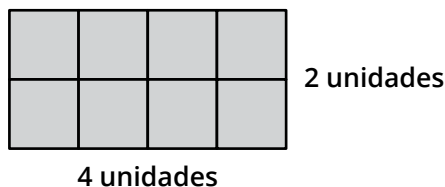
El perímetro de este rectángulo es de 12 unidades.

Atributo (Attribute): cualquier característica que define o no define una figura, incluyendo las propiedades (p. ej., lados rectos, el color azul).

4 ángulos rectos:



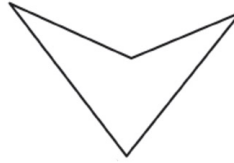
Perímetro (Perimeter): el límite o la longitud del límite de una figura de dos dimensiones.



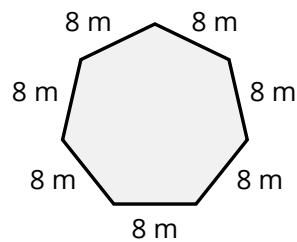
El área de este rectángulo es de 8 unidades cuadradas.



Polígono (*Polygon*): una figura cerrada con tres o más lados rectos (p. ej., triángulo, cuadrilátero, pentágono, hexágono).

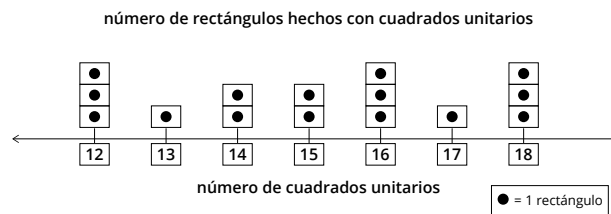


Polígono regular (*Regular polygon*): un polígono con longitudes de lado y ángulos interiores iguales.



Modelos

Diagrama de puntos



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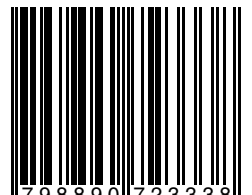
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