

St. Louis School
2024 Summer Math
Entering 6th Grade
Course 3

All students in middle school are required to complete summer math work. This year, to reinforce learning during the summer and promote growth, students will be using IXL online in addition to worksheets for math practice.

- I. **IXL** – Each class has specifically assigned skills in IXL. IXL is an online program geared toward fluency practice. Students simply access the list of skills created by their teacher and click on a link to select an assigned skill. The link will take students to the skill where they login to begin. Students will use their St. Louis account to log on as they have done all school year. [Link to IXL](#)

Students should pace themselves by completing five concepts each month at a level of 80% proficiency (five by June 26, an additional five by July 28, and five more by August 23). Teachers will be monitoring students' progress throughout the summer. Failure to complete the suggested skills will result in a lower effort grade.

Please contact Mrs. Zulma Whiteford at zwhiteford@stlouisparish.org if you have any questions or concerns about IXL.

- II. **Worksheets** – Scroll down to print the worksheets.
- **Show all work either on the worksheet or on looseleaf** in order to receive credit. Answers alone without supporting work will not receive credit.
 - The looseleaf **MUST** include the student's name and be attached to the packet.
 - Make sure to number the problems clearly. Work should be neat and organized.
 - Class notes may be used for reference.

Complete some problems each week. Do not wait until the end of summer to complete the packet. This will allow you to maintain and improve your skills and help you to be successful next year.

All work should be **completed and turned in during the first week of school**. This packet will count as a **15-point assignment with five points awarded per trimester**.

Name _____ Date _____

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1. Solve:

$$(90 - 48) \div 6 + 2$$

$$40 \div 5 + 6 - 3 + 7 \times 3 =$$

Use what you know about order of operations to explain why your answers are correct.

2. Write expressions that match the phrases.

Leo is six years younger than Alex. Let x represent Alex's age. How old is Leo?

Each table holds the same amount of students. There are 56 students at t tables. How many students are at each table?

3. Extend the pattern with three more numbers, using the rule $2x-1$.

5, _____, _____, _____

Write the number that is ten times larger than:

620

2,872

12,378

Complete the function table: $c = d - 4$

d	c
5	
8	
11	
14	

4. Write the number that is ten times smaller than:

620

2,872

12,378

5. Write the following numbers in standard form:

5×10^2

36×10^3

891×10^4

6. Put the decimals in order from greatest to least.

.541

.5

.63

.1000

.15

.432

7. Circle the numbers which when rounded to the nearest tenth place are

6.5: 6.51

6.41

6.531

6.46

6.49

5.49

6.50

8. Solve the following:

$34 \times 2 =$

$108 \times 3 =$

$35 \times 26 =$

$123 \times 42 =$

9. Macy got a point for every fourth book she read. She read 130 books. How many points did Macy earn?

To redo his kitchen floor, John needs 150 tiles. The tiles come in boxes of eight. How many boxes does John need to buy?

10. Where should the decimal point go in the answer?

$$154.62 + 23.67 = 17829$$

$$34.23 - .5 = 3373$$

$$7.835 \times 4.92 = 385482$$

$$15.3 \div 3.4 = 450$$

11. Solve the following:

$$\frac{3}{4} + \frac{3}{4} =$$

$$1 - \frac{3}{8} =$$

$$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$$

$$\frac{4}{5} - \frac{3}{5} =$$

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

$$\frac{3}{5} + \frac{1}{3} =$$

$$\frac{7}{9} - \frac{1}{6} =$$

$$\frac{5}{6} - \frac{1}{4} =$$

12. For a school pizza party, one class ate $7\frac{1}{3}$ pizzas. The other class ate $6\frac{1}{2}$ pizzas. How many pizzas did they eat all together?

Micah was wrapping a birthday present. He started with $2\frac{1}{5}$ yards of ribbon. Now he has 1 and a $\frac{1}{2}$ yards left. How much ribbon did he use?

13. The school council is having a party. There are eight people on the council. They have ordered 7 pizzas to share. What fraction of the pizzas will each member get?

Solve the following, if necessary, use fractions for the remainders.

$$4 \div 3 =$$

$$10 \div 4 =$$

$$5 \div 2 =$$

14. The school bus went to a farm for a field trip. It took $1\frac{1}{4}$ hours to drive there, but on the way back it took $\frac{4}{5}$ of that time. How long did it take to get back?

Solve the following:

$$\frac{1}{4} \text{ of } 16 =$$

$$4 \times \frac{1}{3} =$$

$$6 \times \frac{1}{4} =$$

15. An architect needs to design three buildings. The second building needs to be $\frac{1}{2}$ the height of the first building. And the last building needs to be $\frac{1}{4}$ of the height of the first building and $\frac{1}{2}$ the height of the second building. If the first building is 30 feet tall, what are the heights of the other buildings?

16. Mark makes \$200 a month. How much does he get paid in $3\frac{1}{2}$ months? Larry gets paid \$300 a month. How much does he get paid during that same time?

17. A painter was painting a house and painted $\frac{1}{2}$ of it blue. The owner wanted it purple. So the painter painted over the blue and painted $\frac{3}{4}$ of the purple with blue before the end of the day. How much of the house is unpainted? How much is blue? How much is purple?

18. Put $<$, $>$, or $=$ between each pair.

3 $\frac{1}{2}$ hours _____ 200 minutes
3 quarts _____ 6 cups
5 kilometers _____ 5,000 meters
35 feet _____ 11 yards

19. One can of soda has a capacity of 355 mL. How many cans of soda would you need to buy to have more than a 2 liter bottle of soda?

20. Scott is digging a hole for a swimming pole. The pool will be 20 feet wide, 30 feet long, and five feet deep. How many cubic feet of dirt will he dig out?

21. Draw a shape that has no right angles, all sides are congruent and all interior angles add up to less than 360° .

Draw two shapes that have four 90° vertices, with opposite sides parallel.

Draw and label three different quadrilaterals.

Draw and label four different triangles.

Integers

absolute value - the number of units any integer is away from zero

$|3|$ is read as “the absolute value of 3” So, the $|3|$ is 3 because it is 3 digits away from 0. $|-8|$ is 8 because it is 8 digits away.

Find the absolute value.

$$|5| \quad | -6| \quad |23| \quad - |45|$$

$$|-8| - |5| = \quad 6 + |-2| =$$

Evaluate each expression if $x = 3$, $y = 4$, and $z = 2$

$$10 - |x| = \quad 2y - |x| = \quad |z| + 19 =$$

integer - any number from the set $\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$, they are positive and negative

positive integers - numbers that are greater than zero

negative integers - numbers that are less than zero

Compare the integers: Use $<$ or $>$

$$-3 \quad 4 \quad -1 \quad -2 \quad -7 \quad -3 \quad 5 \quad 9$$

Put the following integers in order from least to greatest. $\{-4, 4, -9, 6, 1, -1\}$

Find each sum.

$$-3 + -4 = \quad 5 + 2 = \quad 6 + (-14) = \quad -3 + 6 =$$

$$|-4 + 15| = \quad |-2 + 11| = \quad |17 + (-25)| =$$

Additive inverse - an integer and its opposite

The sum of any two numbers and its additive inverse is 0.

$$2 + (-2) = \underline{\hspace{2cm}} \quad -7 + (7) = \underline{\hspace{2cm}} \quad -6 + (-15) + 6 = \underline{\hspace{2cm}}$$

To subtract integers, add its additive inverse.

Ex. $4 - 9 = 4 + (-9)$

Find each difference.

$$9 - (-2) = \underline{\hspace{2cm}} \quad 3 - (-5) = \underline{\hspace{2cm}} \quad 18 - (-2) = \underline{\hspace{2cm}}$$

$$-5 - (-11) = \underline{\hspace{2cm}} \quad -7 - 8 = \underline{\hspace{2cm}} \quad 6 - 15 = \underline{\hspace{2cm}}$$

Evaluate each expression if $a = 4$, $b = 3$, and $c = -10$

$$a - b - c$$

$$b - c + a$$

Suppose you deposited \$25 into your checking account and wrote a check for \$38. What was the change in your account balance?

Multiplying Integers

The product of two integers with the same sign is positive.

$$3 \times 4 = \underline{\hspace{2cm}} \quad -3 \times -4 = \underline{\hspace{2cm}}$$

The product of two integers with different signs is negative.

$$-3 \times 4 = \underline{\hspace{2cm}} \quad 4 \times -3 = \underline{\hspace{2cm}}$$

$$5 \times 3 = \underline{\hspace{2cm}} \quad 4 \times 8 = \underline{\hspace{2cm}} \quad 12 \times 12 = \underline{\hspace{2cm}} \quad 5 \times 11 = \underline{\hspace{2cm}}$$

Simplify Algebraic Equations

You can use the rules for multiplying integers to simplify and evaluate algebraic expressions. Multiply the integers together and group the variables.

$$-7(4b) = \underline{\hspace{2cm}} \quad -3(6y) = \underline{\hspace{2cm}} \quad -2x(3y) = \underline{\hspace{2cm}}$$

$$\text{Solve: } -5 \times 5 = \underline{\hspace{2cm}} \quad 4 \times 3 = \underline{\hspace{2cm}} \quad 8 \times -2 = \underline{\hspace{2cm}} \quad -3 \times -5 = \underline{\hspace{2cm}}$$

$$-9 \times -9 = \underline{\hspace{2cm}} \quad -5 \times 7 = \underline{\hspace{2cm}} \quad -6 \times -6 = \underline{\hspace{2cm}} \quad 3 \times -5 = \underline{\hspace{2cm}}$$

Dividing Integers

The quotient of two integers with the same sign is positive.

$$-10 \div (-5) = \underline{\hspace{2cm}} \quad 10 \div 5 = \underline{\hspace{2cm}} \quad (-48) \div (-12) = \underline{\hspace{2cm}}$$

The quotient of two integers with different signs is negative.

$$-35 \div 5 = \underline{\hspace{2cm}} \quad 14 \div (-2) = \underline{\hspace{2cm}} \quad -12 \div 6 = \underline{\hspace{2cm}}$$

Simplify Algebraic Equations -

You can use the rules for dividing integers to simplify and evaluate algebraic expressions.

Evaluate if $x = -6$ and $y = -3$

$$12y \div x = \underline{\hspace{2cm}} \quad -5x \div y = \underline{\hspace{2cm}} \quad -2x \div y = \underline{\hspace{2cm}}$$

$$\text{Solve: } -25 \div 5 = \underline{\hspace{2cm}} \quad 24 \div 3 = \underline{\hspace{2cm}} \quad 18 \div -2 = \underline{\hspace{2cm}} \quad -35 \div -5 = \underline{\hspace{2cm}}$$

$$9 \div -9 = \underline{\hspace{2cm}} \quad -56 \div 7 = \underline{\hspace{2cm}} \quad -66 \div -6 = \underline{\hspace{2cm}} \quad 30 \div -5 = \underline{\hspace{2cm}}$$

Graphing in Four Quadrants

We group each section of a coordinate grid into four sections, or quadrants. The quadrants are named in Roman Numerals

Quadrant I (+, +), II (-, +), III (-,-), and IV (+,-).

Each quadrant has specific positive and negative numbers.

Remember that the point graphed on the coordinate plane has an x-coordinate and a y-coordinate.

(-2, 3) The x-coordinate is _____ and the y-coordinate is _____.

When we graph, we graph going across (left or right) the x-coordinate first, then up or down on the y-coordinate.

Graph and label the following coordinates:

A (3, 4) B (-2, -3) C (0, 6)

D (5, 0) E (-1, 2) F (6, -4)

