

Name _____

1. Kara followed these steps to evaluate the expression $22 + (30 - 4) \div 2$.

$$30 - 4 = 26$$

$$26 + 22 = 48$$

$$48 \div 2 = 24$$

George looks at Kara's work and says she made a mistake. He says she should have divided by 2 before she added 22.

Part A

Which student is correct? Explain how you know.

Part B

Evaluate the expression.

2. Select other ways to write 60,472. Mark all that apply.

(A) $(6 \times 10,000) + (4 \times 100) + (7 \times 10) + (2 \times 1)$

(B) $60,000 + 400 + 70 + 2$

(C) sixty thousand, four hundred seventy-two

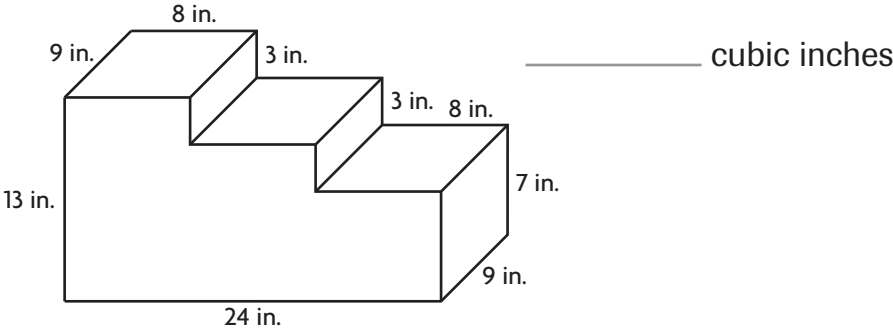
(D) six thousand, four hundred seventy-two

3. Divide. Show your work.

$$17 \overline{)5,210}$$



4. What is the volume of the composite figure?



5. 0.3
 <
>
=
 0.030

6. For numbers 6a–6d, tell which expressions require you to rename mixed numbers before you can subtract. Find each difference. Write each expression and the difference in the correct box.

6a. $2\frac{1}{3} - 1\frac{3}{4}$

6c. $5\frac{2}{3} - 2\frac{5}{8}$

6b. $1\frac{3}{4} - \frac{7}{8}$

6d. $6\frac{1}{5} - 2\frac{1}{3}$

Requires Renaming

Does Not Require Renaming

7. Ganesh is making a scale model of the Space Needle in Seattle, Washington. The space needle is 605 feet tall. If the model is $\frac{1}{100}$ the actual size of the Space Needle, how tall is the model?

_____ feet



8. It takes Evan $6\frac{3}{4}$ hours to mow 3 lawns. It takes him $2\frac{1}{3}$ hours to mow Mr. Gal's lawn and $1\frac{3}{4}$ hours to mow Ms. Lee's lawn. How many hours does it take Evan to mow the third lawn? Use the numbers and symbols to write an equation that represents the problem. Then solve the equation. Symbols may be used more than once or not at all.

$6\frac{3}{4}$	$2\frac{1}{3}$	$1\frac{3}{4}$	\times	$=$	$+$
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Time needed to mow the third lawn: _____ hours

9. Jesse surveyed $\frac{3}{4}$ of the students at her school. Of those surveyed, $\frac{2}{3}$ participate in a school club or sports team. What fraction of the students surveyed participate in a school club or sports team? For numbers 9a–9c, select the correct values to describe how to solve the problem.

9a. Draw a rectangular array with 3 rows and

3
4
5

 columns.

9b. Shade

1
2
3

 of the rows gray and

4
5
6

 of the gray squares black.

9c. Of the students Jesse surveyed,

$\frac{1}{2}$
$\frac{3}{4}$
$\frac{3}{8}$

 participate in a school club or sports team.

11. Write seventeen thousand and one hundred six thousandths in standard form.

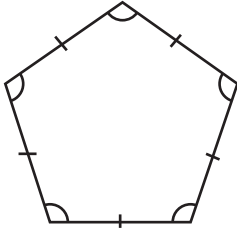


11. It took Mary Lou $\frac{5}{6}$ hour to write a report for English class. It took Heather $\frac{9}{10}$ as much time to write her report as it took Mary Lou. For numbers 11a–11b, select Yes or No to answer each question.

- 11a. Did Mary Lou and Heather take the same amount of time to write their reports? Yes No
- 11b. Did Mary Lou spend more time writing her report than Heather? Yes No

12. Four friends share 3 apples equally. What fraction of an apple does each friend get?

13. Julia drew the shape shown. For numbers 13a–13b, choose the values and term that correctly describe the shape Julia drew.



13a. The figure has

4
5
6

 sides and

5
6
10

 angles.

13b. The figure is a

regular heptagon
regular hexagon
regular pentagon

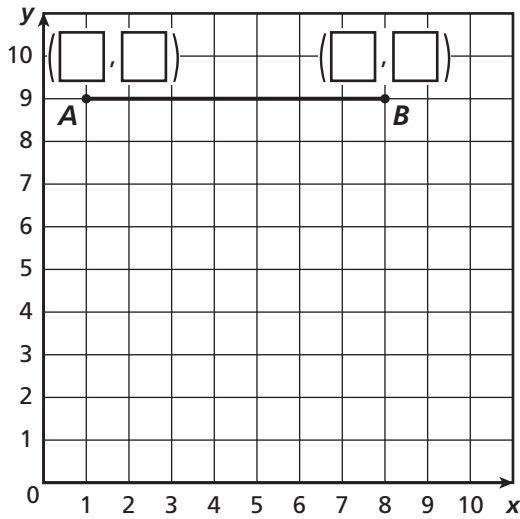
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14. Rich earns \$35 per week mowing lawns in his neighborhood. Which expression can be used to show how much money he earns in 8 weeks?

- A $(8 + 30) + (8 + 5)$ C $(8 + 30) \times (8 + 5)$
- B $(8 \times 30) + (8 \times 5)$ D $(8 \times 30) \times (8 \times 5)$



15. The graph shows the line segment AB . Write the ordered pairs that represent the endpoints of line segment AB .



16. Myra is painting a 76 inch by 22 inch mural along the gym wall. How many square inches will she paint? Write the numbers in the boxes that will complete the model and then solve.

	□	+	□	
+				
				_____ square inches

17. Choose the digits that show 3.096 rounded to the nearest hundredth.

2	0	0
3	1	7
4	2	8
		9

18. Divide. Draw a number line to show your work.

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

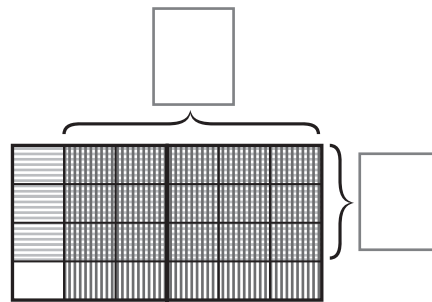
19. Patel drew the area model to help him solve a multiplication problem.

Part A

Use the numbers from the list on the right to complete the area model.

Part B

What is the answer to the problem Patel was working on? Show your work.



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

20. Which problems will have two decimal places in the product?
Mark all that apply.

- A 5×0.89
 B 7.4×10
 C $5.31 \times 10^\circ$
- D 6.1×3
 E 3.2×4.3



- 21.** Without multiplying, classify each product as being less than $\frac{3}{4}$, equal to $\frac{3}{4}$, or greater than $\frac{3}{4}$. Write the letter of each expression in the correct box.

A $\frac{3}{4} \times \frac{2}{3}$	B $\frac{3}{4} \times \frac{3}{2}$	C $\frac{3}{4} \times \frac{5}{5}$	D $\frac{3}{4} \times \frac{1}{3}$	E $\frac{3}{4} \times \frac{7}{5}$	F $\frac{3}{4} \times 3$
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Less Than $\frac{3}{4}$

Equal to $\frac{3}{4}$

Greater Than $\frac{3}{4}$

- 22.** Leah filled bags with granola.

The weights of the bags are $\frac{1}{6}$ lb, $\frac{2}{3}$ lb, $\frac{1}{2}$ lb, $\frac{1}{6}$ lb, $\frac{1}{2}$ lb, $\frac{1}{6}$ lb, $\frac{1}{3}$ lb, $\frac{1}{2}$ lb, $\frac{1}{6}$ lb, $\frac{1}{3}$ lb, $\frac{2}{3}$ lb, $\frac{1}{3}$ lb, $\frac{1}{6}$ lb, $\frac{1}{6}$ lb, $\frac{1}{2}$ lb, $\frac{2}{3}$ lb. Organize the information in a line plot.

What is the average weight of the bags?

_____ pound(s)

- 23.** Match the figure with the number of unit cubes that would be needed to build each figure. Not every number of unit cubes will be used.



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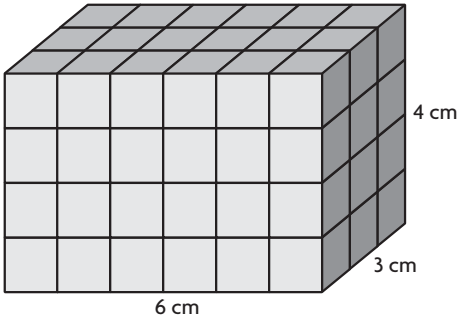
- 7 unit cubes
- 8 unit cubes
- 9 unit cubes
- 10 unit cubes

- 24.** Aidan buys one package each of 2-pound, 3-pound, and 4-pound packages of ground turkey to make turkey burgers. How many $\frac{1}{3}$ -pound turkey burgers can he make? Show your work using words, pictures, or numbers.

25. Teresa has cubes that measure 3 inches on each side. Which of statements are true? Mark all that apply.

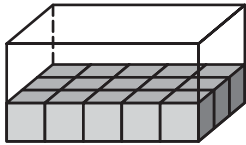
- A** The volume of one cube is 27 cubic inches.
- B** If Teresa fills a box with 10 cubes, the volume of the box is about 200 cubic inches.
- C** If the volume of the box is 810 cubic inches, Teresa can fit 30 cubes in the box.
- D** If the volume of the box is 1,000 cubes, Teresa can fit 40 cubes in the box.

26. Jane used 1-centimeter cubes to build the rectangular prism shown. Find the volume of the rectangular prism Jane built.



_____ cubic centimeters

27. Alison packed 1-inch cubes into a box with a volume of 45 cubic inches. How many layers of 1-inch cubes did Alison pack?



_____ layers

28. Kristin drew a triangle with no congruent sides and no congruent angle. Which term accurately describes the triangle? Mark all that apply.

- A** isosceles
- B** scalene
- C** equilateral
- D** quadrilateral



Alberto's Fish Tank

Alberto gets a fish-tank kit for his birthday. The kit comes with a 15-gallon tank, bags of colored gravel, and water-cleaning drops. Use this information to answer questions 1–4. Show your work. Write all answers in simplest form.

1. The chart below shows how much of each color of gravel Alberto puts in the bottom of his fish tank.

Color	Black	Gray	White	Yellow
Gravel (pounds)	$7\frac{1}{4}$	$5\frac{7}{8}$	$4\frac{1}{2}$	$3\frac{1}{8}$

- a. How many pounds of gravel does Alberto put in the tank?

- b. Each color of gravel comes in an $8\frac{1}{2}$ -pound bag. How many pounds of gravel should Alberto have left after putting in all of the colored gravel?



Name _____

**Middle-of-Year
Performance Task**

2. Once the gravel is in place, Alberto puts 15 gallons of water in his fish tank.
- a. During the first week, $\frac{3}{40}$ of the water in the tank evaporates. How much water is left in the fish tank?

- b. Alberto adds enough water to bring the tank back up to 15 gallons of water. Then he adds water-cleaning drops to the 15 gallons of water in the tank. The directions say to use 1 drop for each $\frac{1}{4}$ gallon of water. After putting in $\frac{2}{3}$ of the total drops needed, Alberto has to stop and answer his phone. How many more drops does Alberto still need to add to the water? Explain how you found your answer.



Name _____

**Middle-of-Year
Performance Task**

- 3.** Alberto puts 3 kinds of fish in his fish tank: zebra danios, fancy guppies, and catfish. Half of Alberto's fish are zebra danios. He has 2 times as many catfish as he has fancy guppies.
- a.** Alberto's friend Jackson says that $\frac{1}{3}$ of Alberto's fish are catfish. Is Jackson correct? Draw a diagram and explain your answer.

- b.** One of Alberto's zebra danios is $\frac{4}{3}$ the length of one of his fancy guppies. Which fish is longer? Explain how you know.



Name _____

**Middle-of-Year
Performance Task**

4. Alberto feeds his fish the same amount of food each day. A 2-ounce jar of fish-food flakes has enough food for Alberto to feed his fish for 100 days.

a. How many ounces of food will Alberto need for 110 days? Explain how you found your answer.

b. Alberto is thinking of buying a jar of fish-food flakes that will last 110 days. If he does not change the number of fish, how many of these jars of fish-food flakes would Alberto need to buy in 1 year?

