

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## INCOMING GRADE 6 MATHEMATICS 2022 SUMMER PACKET

### Directions:

- Read and answer the questions carefully
- Record your answers to this cover page
- Show All Your Work to receive
- If you have IXL, practice the IXL skills below

Domain	Need more Practice	✓	Next Step IXL
Expressions & Equations			(5-O.6)(5-O.3)(5-O.4) (5-T.2)(5-V.8)(5-V.9) (5-V.10)(5-O.5)
Numbers and Operations			(5-A.1)(5-A.2)(5-G.4) (5-E.3)(5-I.2)(5-J.1) (5-J.2)(5-G.1)(5-G.3) (5-G.5)(5-G.16)(5-G.9) (5-G.10)(5-G.7)(5-H.8) (5-C.17)(5-C.18)(5-C.20) (5-D.11)(5-D.16)(5-H.1) (5-H.2)(5-I.6)(5-O.7)(5-S.3)(5-S.6)
Fractions, Decimals, Ratios & Proportionality			(5-L.9)(5-L.12)(5-L.19) (5-L.20)(5-L.21) (5-K.16) (5-EE.12)(5-M.23)
Measurement, Geometry, Statistics & Probability			(5-EE.6)(5-Z.18)(5-Z.21) (5-Z.22)(5-W.12) 5-EE.13 (5-U.2)(5-U.4) (5-BB.5) (5-BB.10)(5-BB.3)

Item #	Answer	Item #	Answer
1		41	
2		42	
3		43	
4		44	
5		45	
6		46	
7		47	
8		48	
9		49	
10		50	
11		51	
12		52	
13		53	
14		54	
15		55	
16		56	
17		57	
18		58	
19		59	
20		60	
21		61	
22		62	
23		63	
24		64	
25		65	
26		66	
27		67	
28		68	
29		69	
30		70	
31		71	
32		72	
33		73	
34		74	
35		75	
36		76	
37		77	
38		78	
39		79	
40		80	
<b>Score</b>		<b>%</b>	

Name \_\_\_\_\_

## Expressions & Equations

Read each question. Then mark your answer on the sheet.

1. Each pound of snack mix uses 2 ounces of peanuts, 5 ounces of raisins, and some other nuts. A batch of mix has 12 ounces of peanuts. How many ounces of raisins does it have?

Peanuts	2	4	6				
Raisins	5	10					

- A** 30 ounces      **C** 22 ounces  
**B** 24 ounces      **D** 19 ounces

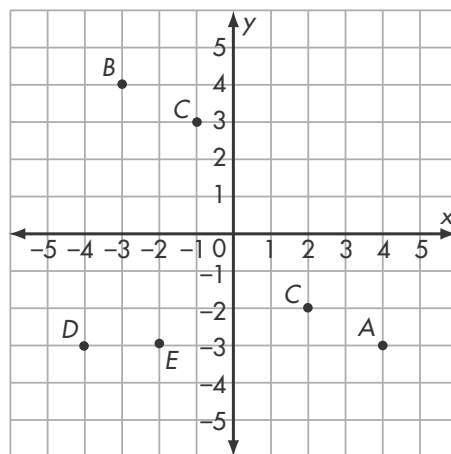
2. The population of the United States exceeds 315,974,200. What is the value of the 3 in this number?

- A** 300 billion  
**B** 30 billion  
**C** 300 million  
**D** 30 million

3. Which list shows these numbers ordered from least to greatest?

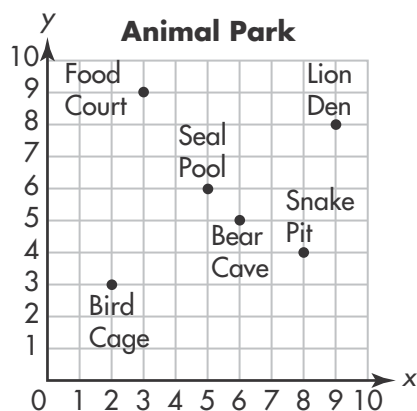
- A** 5,687,423; 5,867,423;  
 6,587,423; 6,857,423  
**B** 5,867,423; 5,687,423;  
 6,587,423; 6,857,423  
**C** 6,857,423; 5,687,423;  
 5,867,423; 6,587,423  
**D** 6,587,423; 6,857,423;  
 5,687,423; 5,867,423

4. Which ordered pair names point A?



- A**  $(-4, -3)$   
**B**  $(4, -3)$   
**C**  $(-3, 4)$   
**D**  $(-2, -3)$

5. Which ordered pair shows the location of the bear cave?



- A**  $(5, 5)$   
**B**  $(5, 6)$   
**C**  $(6, 5)$   
**D**  $(6, 4)$

Name \_\_\_\_\_

## Expressions & Equations

Read each question. Then mark your answer on the sheet.

6. What is the rule for the table?

$n$	0	1	2	3	4
	0	3	6	9	12

- A**  $n - 3$                       **C**  $2n + 3$   
**B**  $n + 3$                       **D**  $3n$

7. Which equation describes the function table?

$a$	$b$
-2	-3
0	1
2	5
4	9

- A**  $b = a - 1$   
**B**  $a = b - 1$   
**C**  $b = 3a + 3$   
**D**  $b = 2a + 1$

8. Which expressions are equivalent to  $(6 \times 4) + (6 \times 7)$ ? Choose all that apply.

- A**  $24 + 42$   
**B**  $4(6 + 7)$   
**C**  $(6 \times 7) + (6 \times 4)$   
**D**  $6(4 + 7)$

9. Evaluate  $(24 \div 6) \times (3 + 2)$ .

- A** 20                      **C** 14  
**B** 15                      **D** 12

10. Steven walked up 6 steps, then he walked up some more steps. Which expression shows the number of steps Steven walked?

- A**  $6 \div x$   
**B**  $6x$   
**C**  $x - 6$   
**D**  $6 + x$

11. Which expression is equivalent to  $3(7 + 8)$ ? Choose all that apply.

- A**  $21 + 24$   
**B** 45  
**C**  $21 + 8$   
**D**  $3 \times 15$

12. Which expression is three times as large as  $(412 + 521)$ ? Choose all that apply.

- A** 933  
**B**  $3 \times (412 + 521)$   
**C**  $(412 + 521) \times 3$   
**D**  $(3 \times 412) + (3 \times 521)$

Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

- 13.** There were 5,212 movie tickets sold on Friday night and 3,742 tickets sold on Saturday night. How many movie tickets were sold on these two days?

**A** 8,854 movie tickets  
**B** 8,954 movie tickets  
**C** 8,964 movie tickets  
**D** 9,054 movie tickets

- 14.** Zane scored 47,421 points on the video game. Skully scored 74,762 points. How many more points did Skully score than Zane?

**A** 122,183 points  
**B** 37,441 points  
**C** 37,341 points  
**D** 27,341 points

- 15.** Use mental math to find the quotient.

$$56,000 \div 800 =$$

**A** 7  
**B** 70  
**C** 700  
**D** 7,000

- 16.** A bakery sells \$1,920 in bagels each day. At that rate, how much money would be collected on bagel sales in a month with 28 days?

**A** \$53,860  
**B** \$53,760  
**C** \$18,920  
**D** \$15,360

- 17.** Which expressions are equivalent to  $1,200 \div 40$ ? Choose all that apply.

**A**  $120 \div 4$   
**B** 30  
**C** 48,000  
**D**  $12,000 \div 400$

- 18.** Stan has 3,840 coins. He wants to put them in stacks of 10. How many stacks will he have?

**A** 38 stacks  
**B** 308 stacks  
**C** 380 stacks  
**D** 384 stacks

Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

19. Which is equivalent to  $\frac{2}{3} + \frac{3}{4} = ?$

Choose all that apply.

- A**  $\frac{5}{7}$   
**B**  $\frac{2 \times 4}{3 \times 4} + \frac{3 \times 3}{4 \times 3}$   
**C**  $\frac{8}{12} + \frac{9}{12}$   
**D**  $1\frac{5}{12}$

20. Which is equivalent to  $\frac{4}{5} - \frac{1}{3} = ?$

Choose all that apply.

- A**  $\frac{3}{2}$  or  $1\frac{1}{2}$   
**B**  $\frac{4 \times 3}{5 \times 3} - \frac{1 \times 5}{3 \times 5}$   
**C**  $\frac{12}{15} - \frac{5}{15}$   
**D**  $\frac{7}{15}$

21. Luis brought  $\frac{1}{3}$  pound of peanuts and Joanie brought  $\frac{3}{4}$  pound of peanuts to the school picnic. How many pounds of nuts did they bring in all?

- A**  $\frac{4}{7}$  pound  
**B**  $1\frac{1}{3}$  pounds  
**C**  $1\frac{1}{4}$  pounds  
**D**  $1\frac{1}{12}$  pounds

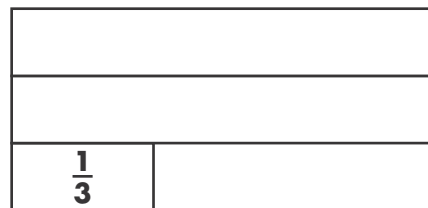
22. Barack ran  $1\frac{3}{4}$  miles to the lake. Then he ran  $3\frac{1}{3}$  miles around the lake. How many miles did he run?

- A**  $3\frac{1}{3}$  miles  
**B**  $4\frac{4}{7}$  miles  
**C**  $5\frac{1}{12}$  miles  
**D**  $5\frac{1}{3}$  miles

23. Which is the best estimate for  $6\frac{2}{8} + 3\frac{5}{8}$ ?

- A** About 8      **C** About 10  
**B** About 9      **D** About 11

24. Mrs. O'Neill bought  $2\frac{1}{3}$  pounds of chicken. The recipe she is preparing calls for  $1\frac{2}{3}$  pounds of chicken. Use the model to find how much chicken Mrs. O'Neill will have left.



- A**  $\frac{2}{3}$  pound      **C**  $1\frac{1}{3}$  pounds  
**B** 1 pound      **D**  $1\frac{2}{3}$  pounds

Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

- 25.** Janet bought  $\frac{7}{8}$  pound of grapes.  
She used  $\frac{3}{4}$  pound in a fruit salad.  
How much did she have left?

**A**  $\frac{1}{8}$  pound  
**B**  $\frac{1}{4}$  pound  
**C**  $\frac{5}{46}$  pound  
**D**  $1\frac{5}{8}$  pounds

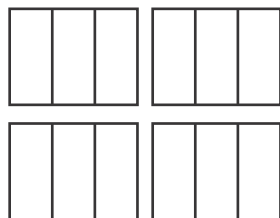
**26.**  $\frac{3}{8} \times \frac{2}{5} =$

**A**  $\frac{1}{8}$   
**B**  $\frac{3}{20}$   
**C**  $\frac{5}{13}$   
**D**  $\frac{25}{40}$

**27.**  $\frac{2}{3} \times 12 =$

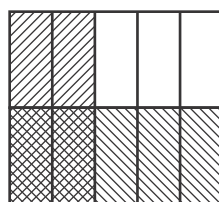
**A**  $\frac{1}{18}$       **C** 8  
**B**  $\frac{1}{8}$       **D** 9

- 28.** Use the picture to find  $\frac{1}{3} \times 4$ .



**A**  $1\frac{1}{3}$       **C** 3  
**B**  $1\frac{2}{3}$       **D** 12

- 29.** What product does the diagram show?

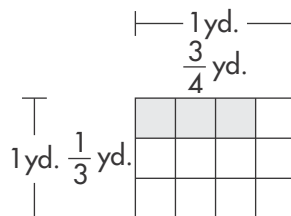


**A**  $\frac{1}{2} \times \frac{2}{5} = \frac{2}{10}$  or  $\frac{1}{5}$   
**B**  $\frac{1}{2} \times \frac{3}{5} = \frac{3}{10}$   
**C**  $\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$   
**D**  $\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$

- 30.** Which is equivalent to  $\frac{2}{3} \times \frac{3}{5} = ?$   
Choose all that apply.

**A**  $\frac{6}{8}$  or  $\frac{3}{4}$       **C**  $\frac{2 \times 3}{3 + 5}$   
**B**  $\frac{2 \times 3}{3 \times 5}$       **D**  $\frac{6}{15}$

- 31.** Sal made a rectangular sign that is  $\frac{3}{4}$  yard by  $\frac{1}{3}$  yard. What is the area of the sign? Choose all that apply.



**A**  $\frac{1}{4}$  square yards  
**B**  $\frac{3}{12}$  square yard  
**C** 3 square yards  
**D** 12 square yards

Name \_\_\_\_\_

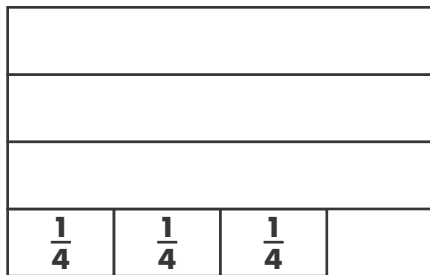
## Numbers and Operations

Read each question. Then mark your answer on the sheet.

- 32.** Kayla's rectangular garden is  $3\frac{1}{2}$  yards by  $4\frac{1}{2}$  yards. What is the area of her garden? Choose all that apply.

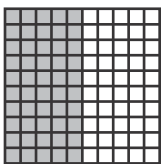
**A** 8 square yards  
**B**  $\left(3\frac{1}{2} \times 4\frac{1}{2}\right)$  square yards  
**C**  $12\frac{1}{4}$  square yards  
**D**  $15\frac{3}{4}$  square yards

- 33.** James ran  $\frac{2}{3}$  of a  $3\frac{3}{4}$  mile trail. Use the model to find how far he ran.



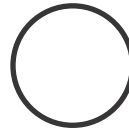
**A**  $2\frac{1}{4}$  miles    **C**  $3\frac{1}{3}$  miles  
**B**  $2\frac{1}{2}$  miles    **D**  $3\frac{1}{2}$  miles

- 34.** Use the picture to find the quotient:  
 $\frac{1}{2} \div 4$ .



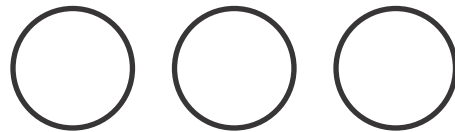
**A**  $\frac{1}{8}$     **C** 2  
**B**  $\frac{1}{4}$     **D** 8

- 35.** Mrs. Jones has  $\frac{2}{3}$  of a peach pie left to share equally among her 4 children. What fraction of the pie will each child get? Use the circle to help you solve the problem.



**A**  $\frac{1}{12}$   
**B**  $\frac{1}{6}$   
**C**  $\frac{1}{4}$   
**D**  $\frac{1}{3}$

- 36.** Hope is making stuffed cabbage rolls. She needs  $\frac{1}{4}$  cup of rice for each cabbage roll. How many cabbage rolls can she make with 3 cups of rice? Use the circles to help you solve the problem.



**A** 4 rolls  
**B** 6 rolls  
**C** 8 rolls  
**D** 12 rolls

Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

---

- 37.** Cheryl put  $\frac{3}{5}$  of a pound of cherries in a bag. Then she added another  $\frac{1}{2}$  pound of cherries to the bag. How many pounds of cherries does she have now? Choose all that apply.

**A**  $\frac{4}{7}$  pound  
**B**  $\left(\frac{6}{10} + \frac{5}{10}\right)$  pounds  
**C**  $1\frac{1}{10}$  pounds  
**D**  $\frac{7}{10}$  pound

---

- 38.** Evaluate  $10 \times 10^0$ .

**A** 1  
**B** 10  
**C** 100  
**D** 1000

---

- 39.** Evaluate  $3.2 \times 10^4$ .

**A** 3.20000  
**B** 3200.00  
**C** 32,000  
**D** 320,000

---

- 40.** Evaluate  $4.25 \div 10^2$ .

**A** 0.0425  
**B** 0.425  
**C** 42.5  
**D** 425

---

- 41.** Luis has a spool of ribbon containing 16.25 feet and a spool containing 7.38 feet. How much ribbon does he have all together?

**A** 8.87 feet  
**B** 13.63 feet  
**C** 23.53 feet  
**D** 23.63 feet

---

- 42.** Ashley rode a total of 34.75 miles. Megan rode a total of 36.20 miles. How many more miles did Megan ride?

**A** 1.45 miles  
**B** 1.55 miles  
**C** 2.35 miles  
**D** 70.95 miles

---



Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

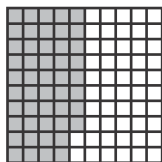
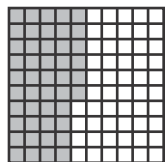
- 43.** There are 1.7 grams of fat in a serving. How many grams of fat are in 0.8 servings?

**A** 13.6 grams      **C** 1.36 grams  
**B** 12.6 grams      **D** 1.26 grams

- 44.** Tickets for rides at a carnival cost \$0.90 each, but you can buy a book of 10 tickets for \$7.50. What is the cost of each ticket in the book of tickets?

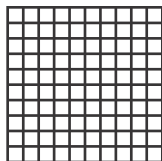
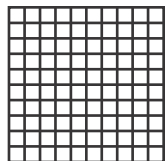
**A** \$0.80      **C** \$0.70  
**B** \$0.75      **D** \$0.65

- 45.** What is  $0.46 + 0.48$ ?



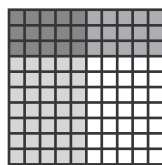
**A** 0.84      **C** 0.94  
**B** 0.86      **D** 0.96

- 46.** What is  $1.47 - 0.69$ ?  
Use the models to help you find the answer.



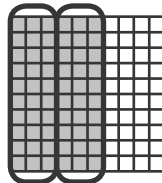
**A** 2.16      **C** 0.88  
**B** 0.98      **D** 0.78

- 47.** Which equation does this area model show?



**A**  $0.5 \times 0.3 = 0.15$   
**B**  $0.5 \times 0.3 = 1.5$   
**C**  $0.5 \times 0.3 = 15.0$   
**D**  $50 \times 30 = 150$

- 48.** Which expression does this decimal model show?



**A**  $0.60 \div 2$   
**B**  $0.60 \div 3$   
**C**  $0.60 \div 4$   
**D**  $0.60 \div 6$

- 49.** Bolts sell for \$1.29 per pound and nails for \$3.29 per pound. What is the total cost of 5 pounds of bolts and 3 pounds of nails?

**A** \$9.87      **C** \$16.4  
**B** \$16.32      **D** \$20.32

Name \_\_\_\_\_

## Numbers and Operations

Read each question. Then mark your answer on the sheet.

50. How much more will it cost to buy 3 pounds of salami than 3 pounds of ham?

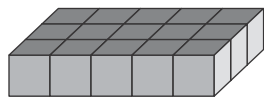
Derek's Deli	
Ham	\$2.99 per lb
Turkey	\$3.19 per lb
Salami	\$3.89 per lb

- A** \$0.90      **C** \$2.70  
**B** \$1.80      **D** \$5.40

51. In standard form, what is  $800 + 70 + 5 + 4\left(\frac{1}{10}\right) + 2\left(\frac{1}{100}\right)$ ?

- A** 87.542      **C** 875.24  
**B** 875.042      **D** 875.42

52. Your mom ordered a quarter sheet cake for your party. The top and sides of the cake are decorated with your favorite frosting. Aunt Debbie would like a piece with as little frosting as possible. How many pieces have only one surface frosted?



- A** 12 pieces  
**B** 8 pieces  
**C** 5 pieces  
**D** 3 pieces

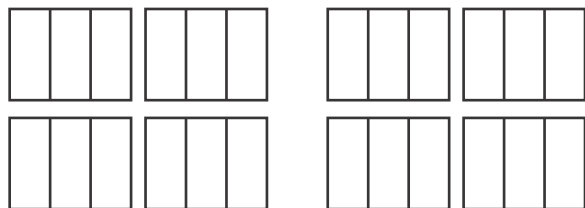
53. Mr. Stykes has 214 stickers to give to his class of 26 students. He plans to give the same number to each student. Which of the following is the only reasonable number of stickers each student will get?

- A** 12 stickers  
**B** 10 stickers  
**C** 8 stickers  
**D** 4 stickers

54. Without multiplying, decide which statements are true. Choose all that apply.

- A**  $3\frac{1}{2} \times 1\frac{1}{3} > 1\frac{1}{3}$   
**B**  $1\frac{4}{5} \times \frac{2}{2} = 1\frac{4}{5}$   
**C**  $\frac{3}{5} \times 2\frac{1}{3} > 2\frac{1}{3}$   
**D**  $\frac{1}{2} \times 1\frac{3}{8} < 1\frac{3}{8}$

55. How many  $\frac{2}{3}$ -cup servings are in 8 cups of raisins?



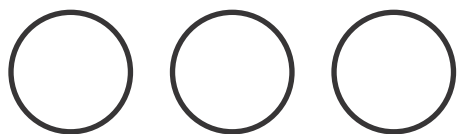
- A** 3      **C** 9  
**B** 6      **D** 12

Name \_\_\_\_\_

## Fractions, Decimals, Ratios, and Proportionality

Read each question. Then mark your answer on the sheet.

56. If five friends share three pizzas equally, how much pizza does each person get? Use the circles to help you solve the problem.



- A  $\frac{3}{8}$  of a pizza  
B  $\frac{1}{2}$  of a pizza  
C  $\frac{3}{5}$  of a pizza  
D  $\frac{4}{5}$  of a pizza

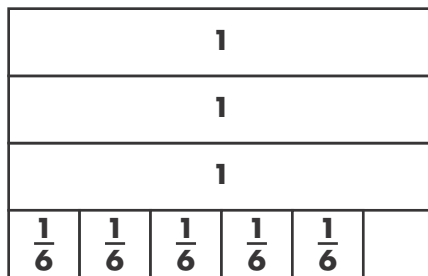
57. Maria made  $\frac{61}{7}$  quarts of juice for a party. What is  $\frac{61}{7}$  expressed as a mixed number?

- A  $7\frac{2}{7}$   
B  $8\frac{2}{7}$   
C  $8\frac{4}{7}$   
D  $8\frac{5}{7}$

58. Fifteen out of 25 people prefer strawberry yogurt over vanilla. Which is  $\frac{15}{25}$  in simplest form?

- A  $\frac{3}{5}$   
B  $\frac{2}{5}$   
C  $\frac{2}{7}$   
D  $\frac{1}{5}$

59. Which number does this model show? Choose all that apply.



- A  $\frac{46}{12}$       C  $3\frac{1}{6}$   
B  $\frac{23}{6}$       D  $3\frac{5}{6}$

60. Which is NOT correct? Choose all that apply.

- A  $0.23 < 0.24$   
B  $0.7 = 0.70$   
C  $0.54 > 0.55$   
D  $4.391 > 4.319$

Name \_\_\_\_\_

## Fractions, Decimals, Ratios, and Proportionality

Read each question. Then mark your answer on the sheet.

**61.** Which is four hundred twelve thousandths in decimal form?

- A** 0.412
- B** 4.120
- C** 4.012
- D** 400.012

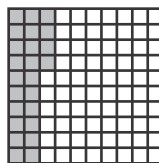
**62.** Which statements are true?  
Choose all that apply.

- A**  $0.544 < 0.534$
- B**  $0.080 = 0.008$
- C**  $0.044 < 0.404$
- D**  $6.381 > 6.380$

**63.** Which is 65.239 rounded to the nearest hundredth?

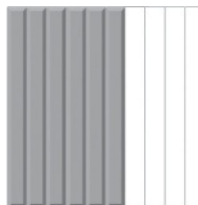
- A** 65.0
- B** 65.2
- C** 65.23
- D** 65.24

**64.** Which fraction is equivalent to the shaded portion of the model?



- A**  $\frac{1}{4}$
- B**  $\frac{24}{100}$
- C**  $\frac{1}{5}$
- D**  $\frac{24}{50}$

**65.** Which fraction is shown by the shaded part of the model?



- A**  $\frac{3}{4}$
- B**  $\frac{7}{10}$
- C**  $\frac{2}{3}$
- D**  $\frac{6}{10}$

Name \_\_\_\_\_

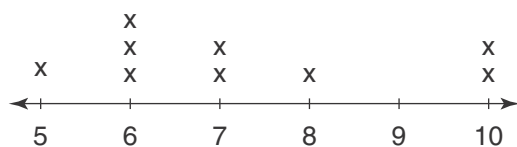
## Measurement, Geometry, Data Analysis, and Probability

Read each question. Then mark your answer on the sheet.

66.  $7 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

- A** 0.07 m                      **C** 70 m  
**B** 0.7 m                        **D** 700 m

67. The line plot shows the number of ounces in each of nine beakers. How much liquid would each beaker contain if the total amount in all the beakers were redistributed equally?



- A** 65 ounces                      **C**  $7\frac{2}{9}$  ounces  
**B** 63 ounces                      **D** 6 ounces

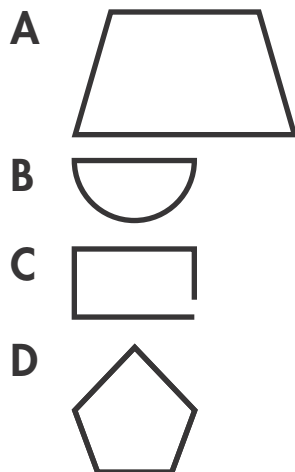
68. Which statements are true?  
Choose all that apply.

- A**  $6 \text{ m} > 550 \text{ cm}$   
**B**  $8 \text{ cm} = 80 \text{ mm}$   
**C**  $1,000 \text{ mm} = 1 \text{ m}$   
**D**  $4.5 \text{ m} < 45 \text{ cm}$

69. Which statements are true?  
Choose all that apply.

- A** In a regular polygon all sides have the same length.  
**B** All quadrilaterals have four right angles.  
**C** All rectangles have four right angles.  
**D** All rectangles are parallelograms.

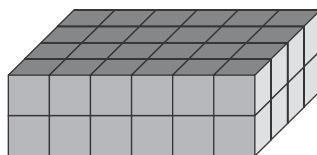
70. Which figures are polygons?  
Choose all that apply.



71. Martin made a triangular flower bed. One side was 14 feet, a second side was 6 feet, and the third side was 10 feet. What type of triangle did Martin form?

- A** Equilateral                      **C** Scalene  
**B** Isosceles                        **D** Straight

72. The picture shows unit cubes in a stack. What is the volume of this rectangular prism?



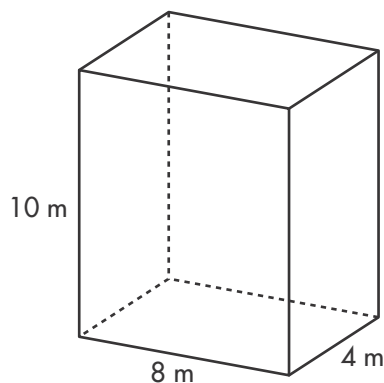
- A** 48 cubic units  
**B** 44 cubic units  
**C** 40 cubic units  
**D** 24 cubic units

Name \_\_\_\_\_

## Measurement, Geometry, Data Analysis, and Probability

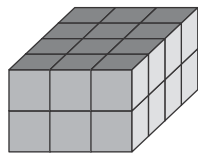
Read each question. Then mark your answer on the sheet.

- 73.** Which of these equations can be used to find the volume of the rectangular prism,  $n$ , in cubic meters? Choose all that apply.



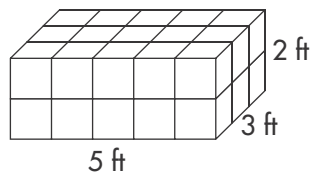
- A**  $n = (10 \times 8) \times 4$   
**B**  $n = (10 \times 4) \times 8$   
**C**  $n = 2(10 \times 8) + 2(10 \times 4) + 2(8 \times 4)$   
**D**  $n = (8 \times 4) \times 10$

- 74.** This rectangular prism is made from boxes that are one cubic centimeter. What is the volume of the prism?



- A**  $26 \text{ cm}^3$   
**B**  $24 \text{ cm}^3$   
**C**  $22 \text{ cm}^3$   
**D**  $12 \text{ cm}^3$

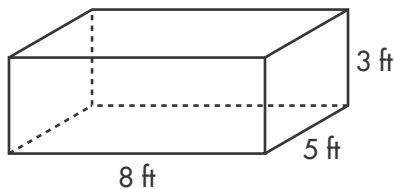
- 75.** Which expressions are equivalent to the volume of the prism, in cubic feet? Choose all that apply.



1 cube = 1 cubic foot

- A**  $(5 \times 3) \times 2$   
**B**  $5(3 \times 2)$   
**C**  $(5 + 3) + 2$   
**D** 30

- 76.** Siggy wants to fill the back of his pick-up truck with cement blocks that are each 1 cubic foot. The dimensions of his truck are shown. How many blocks can he load into the bed of his truck?



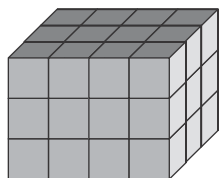
- A** 40 blocks  
**B** 80 blocks  
**C** 120 blocks  
**D** 160 blocks

Name \_\_\_\_\_

## Measurement, Geometry, Data Analysis, and Probability

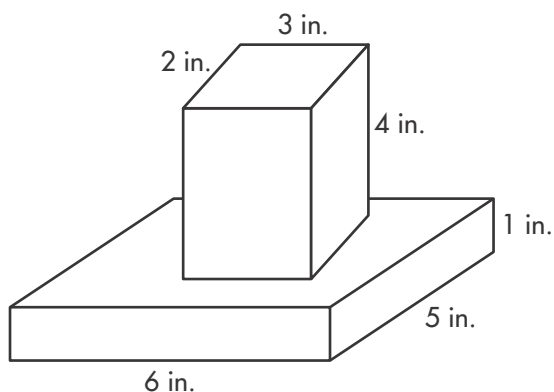
Read each question. Then mark your answer on the sheet.

77. Which expressions are equivalent to the volume of the rectangular prism, in cubic units? Choose all that apply.



- A  $12 + 12 + 12$
- B  $4 + 3 + 3$
- C  $(4 \times 3) \times 3$
- D 36

78. Ryan built this model, which is composed of two non-overlapping right rectangular prisms. What is the volume of the figure?

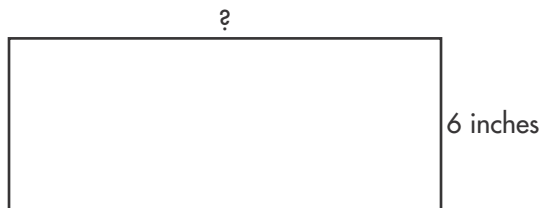


- A  $44 \text{ in.}^3$
- B  $50 \text{ in.}^3$
- C  $54 \text{ in.}^3$
- D  $55 \text{ in.}^3$

79. Mia's rectangular garden has an area of 180 square feet. The length of the garden is 30 feet. What is the width of the garden?

- A 6 feet
- B 15 feet
- C 60 feet
- D 150 feet

80. The perimeter of this rectangle is 42 inches. What is the length of this rectangle?



- A 7 inches
- B 14 inches
- C 15 inches
- D 21 inches