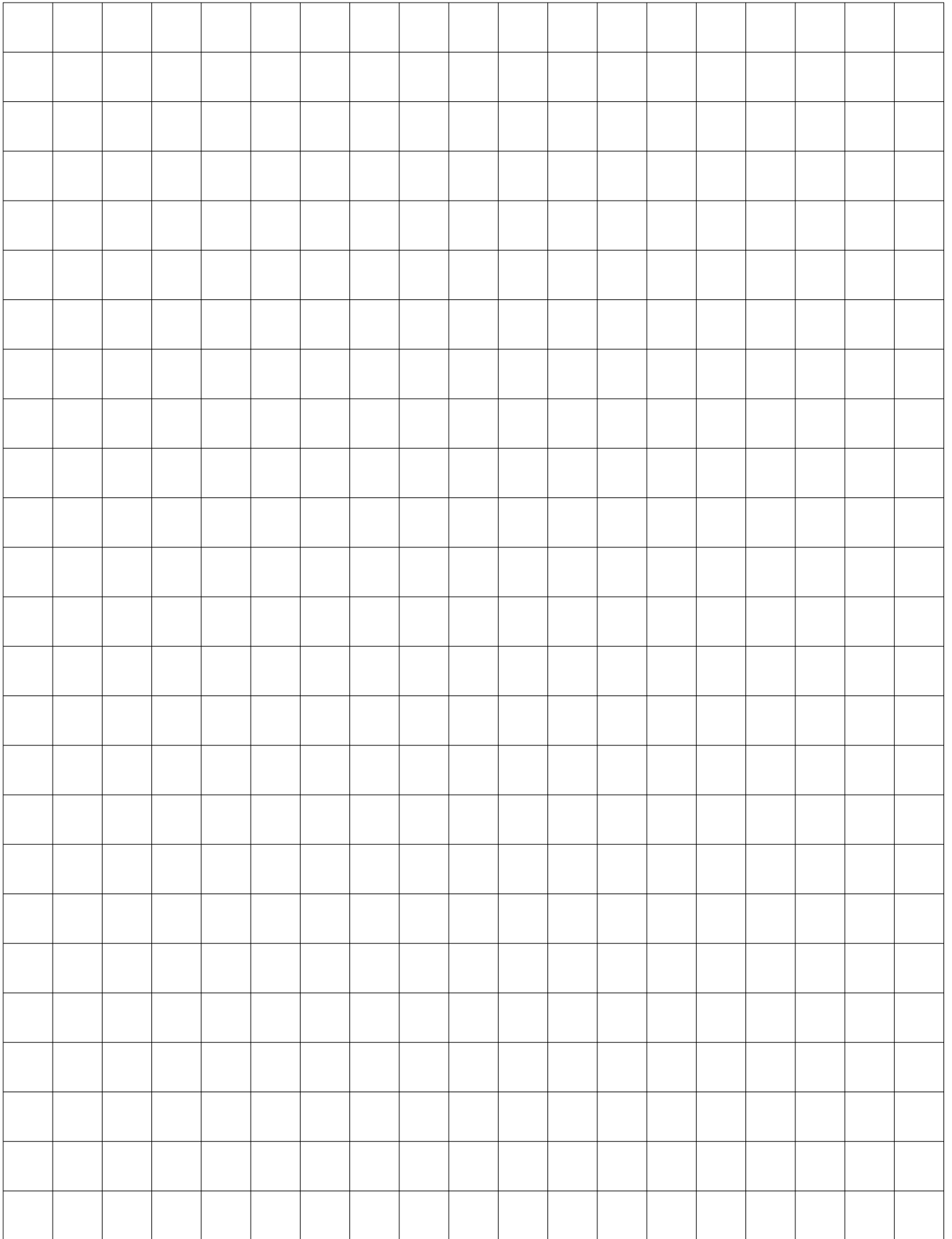


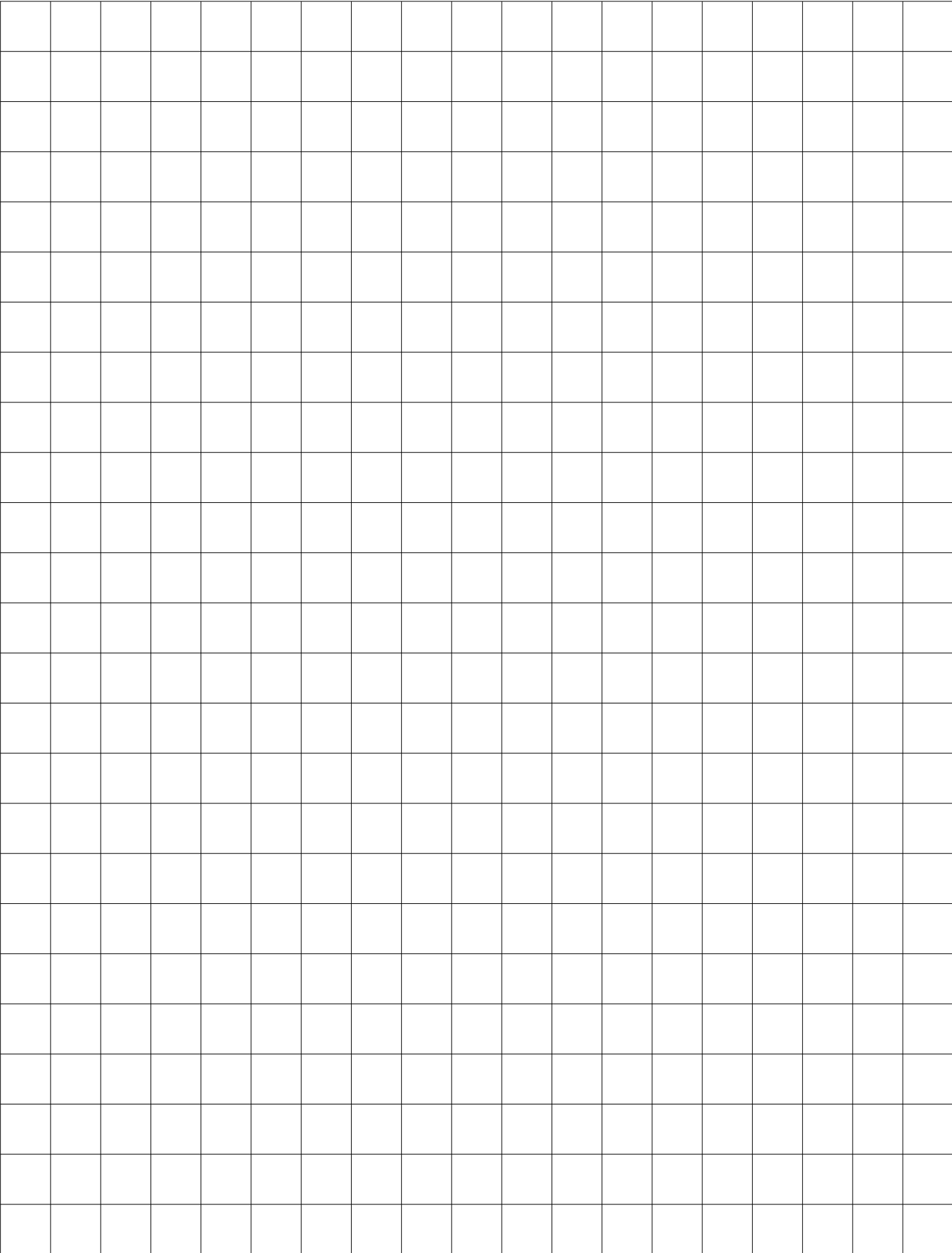


Beginning-of-Year Assessment (BOY)

Grade 5 Mathematics Standards

This BOY assessment is intended to assess current grade 6 students who completed grade 5 mathematics in the 2019-2020 school year.





Congratulations! You worked very hard in school to learn many new things. Taking this Grade 5 Mathematics Standards test is a great way to show your family and school what you learned. It is okay if you do not know all the answers. Just try your best. You are amazing! You are taking this test so adults can learn more about how to help you this year.

You can ask an adult for help if you do not understand the directions. Make sure you have the reference material with the rulers. It might help you with this test. You can also use scratch paper and graph paper for this test.

If you do not know the answer to a question, choose the answer you think might be correct. You must answer the questions on your own.

You are now ready to start. Take your time and remember that trying your best is what is important. You're awesome, and you'll do great!

BOY Assessment Grade 5 Mathematics Standards

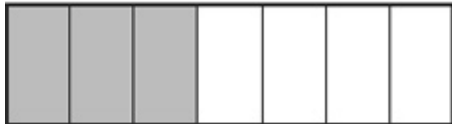
Student _____

Class _____

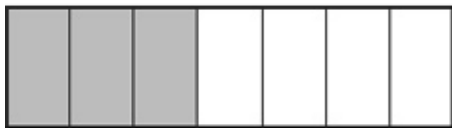
Date _____

1. Darendra worked for 3 weeks. The shaded parts of the model represent the fraction of each week she worked from her home office.

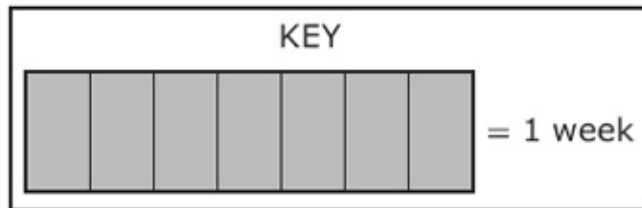
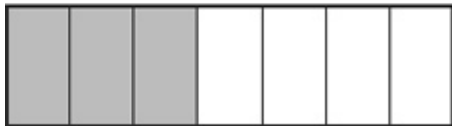
Week 1



Week 2



Week 3



Which expression can be used to determine the number of weeks Darendra worked from her home office over these 3 weeks?

A. $3 + \frac{3}{4}$

B. $3 + \frac{3}{7}$

C. $3 \times \frac{3}{4}$

D. $3 \times \frac{3}{7}$

2. An expression is shown.

$$8 \times (3.8 + 13.2) - 6$$

What value is equivalent to the expression?

- A. 37.6
 - B. 61.4
 - C. 130
 - D. 88
3. One bucket of gravel has a mass of 7.05 kg. What is the mass of 20 buckets of gravel in kilograms?
- A. 14.1 kg
 - B. 150 kg
 - C. 27.05 kg
 - D. 141 kg
4. A rectangular billboard is 9.35 meters wide and 6.82 meters tall. What is the perimeter of the billboard in meters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

5. A math problem is shown.

$$78 \overline{)4.68}$$

What is the quotient?

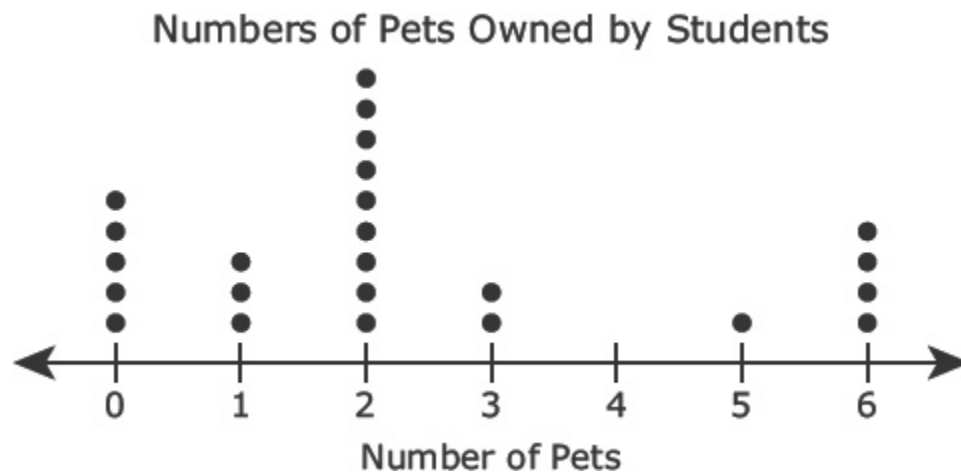
- A. 0.14
 - B. 0.6
 - C. 0.06
 - D. 0.51
6. A bank received a check for two thousand, six hundred nine dollars and seventy-five cents. How is this number written in expanded notation?
- A. $(2 \times 1,000) + (6 \times 100) + (9 \times 10) + (7 \times 0.01) + (5 \times 0.01)$
 - B. $(2 \times 1,000) + (6 \times 100) + (9 \times 1) + (7 \times 0.1) + (5 \times 0.01)$
 - C. $(2 \times 1,000) + (6 \times 10) + (9 \times 1) + (7 \times 1) + (5 \times 1)$
 - D. $(2 \times 1,000) + (6 \times 100) + (9 \times 1) + (7 \times 0.01) + (5 \times 0.001)$

7. The math team does practice drills that each last $\frac{1}{6}$ hour. In February the team did practice drills for a total of 24 hours.

How many practice drills did the math team do in February?

- A. 4
- B. 144
- C. 30
- D. 240

8. The dot plot shows the numbers of pets that the students in a class own.



What fraction of the students in this class have two or more pets?

- A. $\frac{1}{3}$
- B. $\frac{7}{27}$
- C. $\frac{2}{3}$
- D. $\frac{3}{8}$

9. The relationship between numbers in List X and List Y follows the rule $y = x + 2.05$. Which diagram shows this relationship?

A.

<u>List X</u>		<u>List Y</u>
29.1	→	31.6
34.1	→	36.6
39.1	→	41.6
44.1	→	46.6

B.

<u>List X</u>		<u>List Y</u>
31.15	→	33.15
33.2	→	35.2
35.25	→	37.25
37.3	→	39.3

C.

<u>List X</u>		<u>List Y</u>
29.1	→	31.15
34.1	→	36.15
39.1	→	41.15
44.1	→	46.15

D.

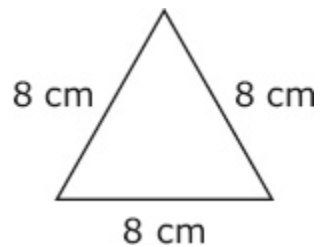
<u>List X</u>		<u>List Y</u>
31.15	→	29.1
36.15	→	34.1
41.15	→	39.1
46.15	→	44.1

10. This graphic organizer is being used to classify triangles based on their angle measures or side lengths.

Triangles

Angle Measure Classification			Side Length Classification		
Acute	Right	Obtuse	Isosceles	Equilateral	Scalene

Which list shows all of the ways this triangle could be classified?



- A. Acute only
- B. Equilateral only
- C. Acute and isosceles only
- D. Acute, isosceles, and equilateral only

11. The table shows the heights and masses of a male gorilla and a female gorilla at a zoo.

	Height (m)	Mass (kg)
Male	1.68	158.757
Female	1.448	95.25

Based on the table, which statement is true?

- A. The combined mass of the male gorilla and the female gorilla is 253.782 kg.
 - B. The mass of the male gorilla is 63.507 kg greater than the mass of the female gorilla.
 - C. The female gorilla is 1.28 m shorter than the male gorilla.
 - D. The combined height of the male gorilla and the female gorilla is 2.028 m.
12. Brenda said that the number 2 is prime because it has only two factors. Carla said that the number 2 is composite because it is even, and all even numbers are composite. Who is correct?
- A. Brenda is correct.
 - B. Carla is correct.
 - C. Both of them are correct.
 - D. Neither of them is correct.

13. Paula wants to buy 3 shirts and 2 belts. The shirts cost \$16.89 each, and the belts cost \$8.97 each. Paula has \$45.

Which of these amounts is the best estimate of how much more money Paula needs in order to buy the shirts and belts?

A. \$16

B. \$10

C. \$24

D. \$5

14. What are the coordinates of the point where the x -axis and the y -axis intersect on a coordinate plane?

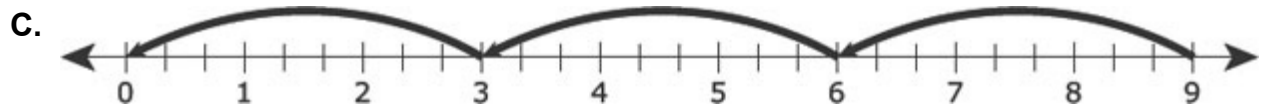
A. (5, 5)

B. (5, 0)

C. (0, 5)

D. (0, 0)

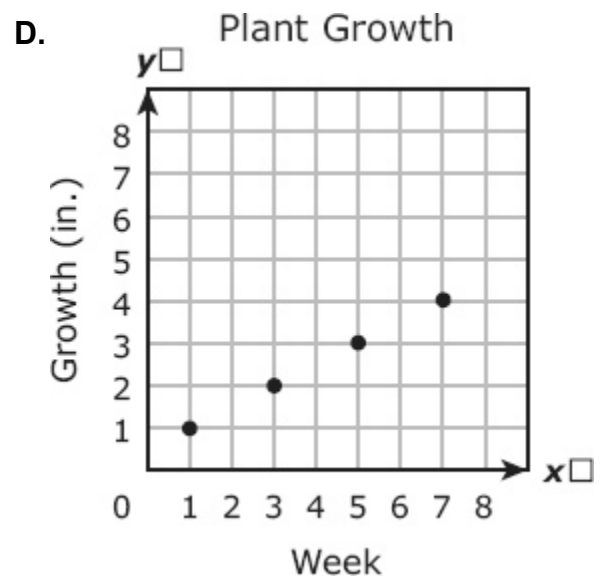
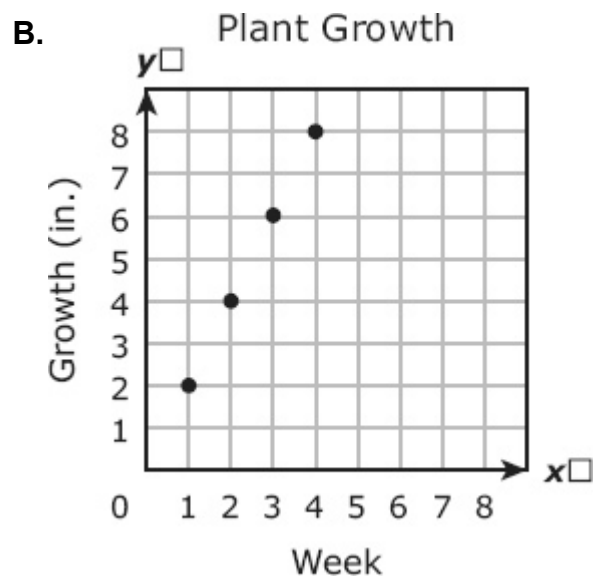
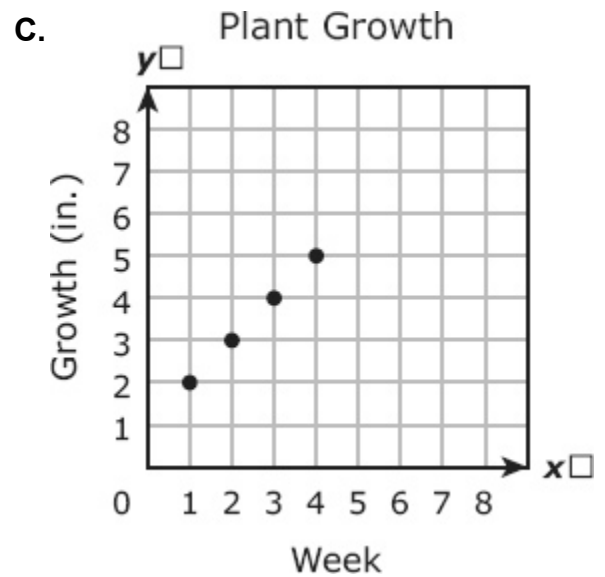
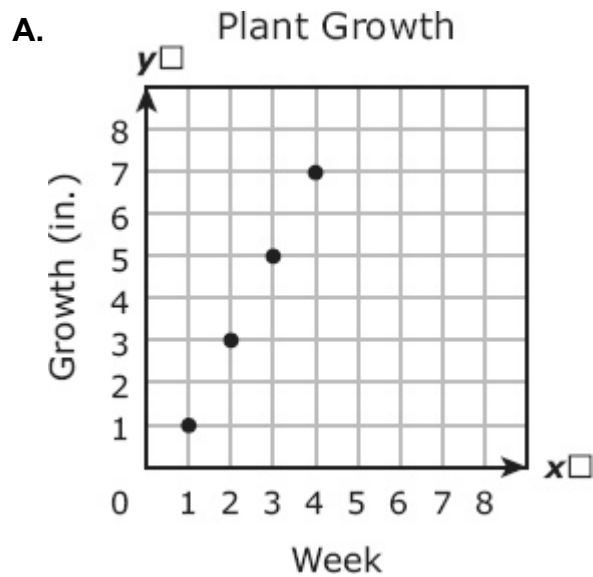
15. Which number line best models the expression $3 \div \frac{1}{3}$?



16. Thomas planted a seed and measured the height of the stem each week for four weeks.

- The stem grew 1 inch in the first week.
- The stem grew 2 inches each week after the first week.

Which graph represents the growth of this plant?



17. Mr. Anderson had 185 pieces of wood. He sold 25 pieces of wood to his neighbor and stacked the rest of the wood into piles around his house. Each pile of wood contained 40 pieces of wood. Which equation can be used to find p , the number of piles of wood Mr. Anderson made?

A. $p = (185 + 25) + 40$

B. $p = (185 - 25) - 40$

C. $p = (185 + 25) \times 40$

D. $p = (185 - 25) \div 40$

18. What is 0.64 rounded to the tenths place?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

19. So far this month Nancy has the expenses and income shown in the chart.

<u>Expenses</u>	<u>Income</u>
Clothes\$40	Lawn mowing\$30
Food\$60	Babysitting\$50
Movie tickets\$30	Car washing\$25
	Garage sale\$35

Nancy wants to buy some music online but also have a balanced budget. Based on Nancy's current budget, what is the greatest amount of money she can spend on music?

- A. \$10
- B. \$35
- C. \$140
- D. \$5

20. Kristin drinks 0.5 liter of orange juice with breakfast each day for 15 days. How many milliliters of orange juice does Kristin drink during the 15 days?

- A. 15,000 mL
- B. 7,500 mL
- C. 750 mL
- D. 500 mL

21. Ms. Jaffey had a total of 428.5 ounces of pretzels to put into 5 bowls for a party. She put an equal number of ounces of pretzels into each bowl.

How many ounces of pretzels did Ms. Jaffey put into each bowl?

- A. 85.7 oz
- B. 97.7 oz
- C. 80.0 oz
- D. 85.3 oz

22. The stem and leaf plot shows the scores of eight people at a dance contest.

Dance Contest Scores

Stem	Leaf
6	8 9 9
7	5
8	2 7
9	5 7

6|8 means 6.8.

What is the difference between the highest score and the lowest score?

- A. 2.8
- B. 2.7
- C. 2.9
- D. 2.6

23. Which table represents the equation $y = 3x$?

A.

x	y
3	1
6	2
15	5
18	6

C.

x	y
1	1
3	3
5	5
7	7

B.

x	y
1	3
3	9
4	12
7	21

D.

x	y
1	3
4	9
6	12
7	18

24. Joshua compared the values of these decimals.

0.06 0.6 0.006 0.060

Which statement correctly compares two of these numbers?

- A. $0.6 < 0.06$
- B. $0.006 > 0.6$
- C. $0.6 = 0.06$
- D. $0.060 = 0.06$

25. Last month Jim drove his car 2,718.3 miles. That brought the car's total mileage to 87,416 miles. What was the car's total mileage before last month?

A. 84,697.7 mi

B. 85,302.7 mi

C. 89,124.3 mi

D. 90,134.3 mi

26. A chef used $\frac{1}{4}$ cup of milk for one recipe. Then she used 2 cups of milk for each of 5 more recipes. The total number of cups of milk the chef used can be found by using this expression.

$$\frac{1}{4} + (2 \times 5)$$

How many cups of milk did the chef use?

A. $10\frac{1}{4}$ c

B. $11\frac{1}{4}$ c

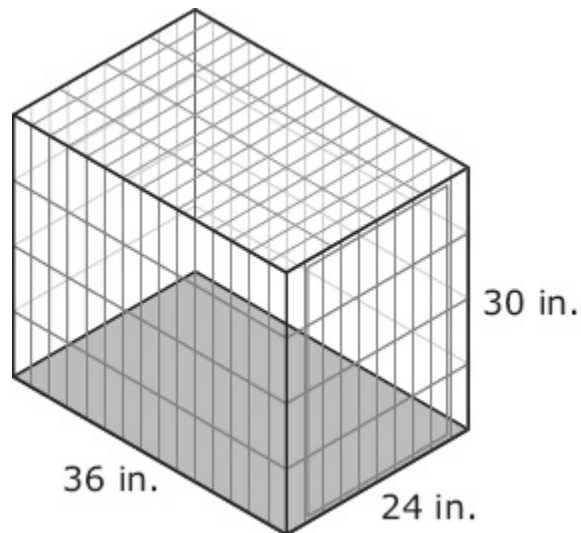
C. $\frac{11}{4}$ c

D. $\frac{15}{4}$ c

27. Tara has a box of 908 beads for making bracelets. She wants to put 15 beads on each bracelet she makes. What is the greatest number of bracelets Tara can make with these beads?

- A. 61
- B. 70
- C. 60
- D. 68

28. Gabriel bought a dog crate shaped like a rectangular prism with the dimensions shown in the model.



What is the area in square inches of the shaded floor of the dog crate?

- A. 864 square inches
- B. 1,080 square inches
- C. 720 square inches
- D. 1,296 square inches

29. The table represents a relationship between x and y .

x	y
5	22
10	27
15	32
20	37

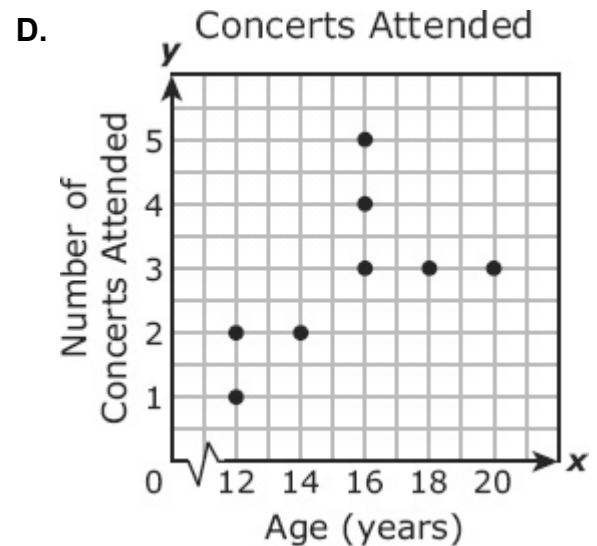
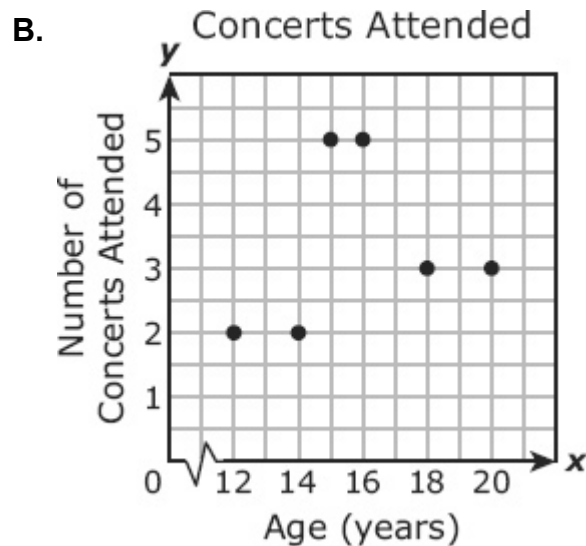
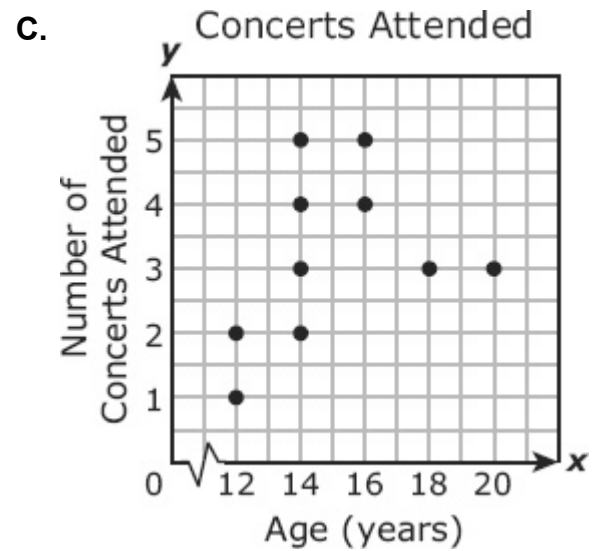
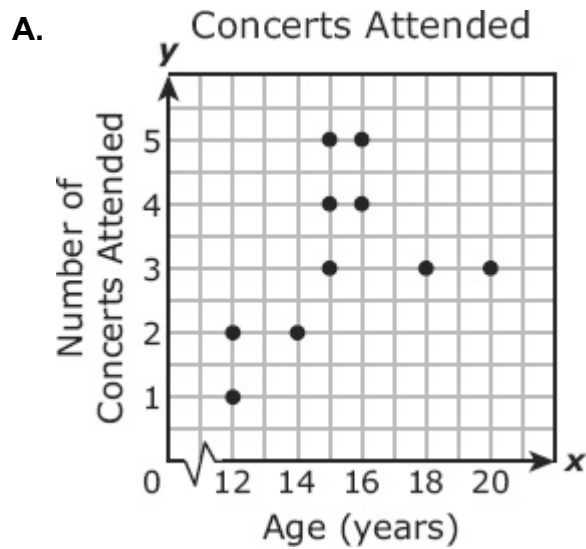
The relationship between the x -values and y -values creates a pattern that is —

- A. additive, because each x -value increases by 5
- B. additive, because each y -value is determined by adding 17 to the corresponding x -value
- C. multiplicative, because each y -value is determined by multiplying the corresponding x -value by 17
- D. multiplicative, because each x -value is a multiple of 5

30. The table shows the ages of 10 people and the numbers of concerts they attended in the last year.

Age of Person (years)	15	12	20	16	14	18	15	16	12	15
Number of Concerts Attended	5	2	3	5	2	3	3	4	1	4

Which scatterplot best represents all the data in the table?



31. Mr. Gonzales is putting in a fence around the perimeter of a playground.

- The perimeter of the playground is 144 ft.
- Each section of the fence is 4 ft long and costs \$12.

Which equation can Mr. Gonzales use to find b , the cost of the sections of fence he needs for the playground?

A. $144 \div (12 \div 4) = b$




B. $(12 \times 4) \times 144 = b$

C. $144 \div (12 \times 4) = b$




D. $(144 \div 4) \times 12 = b$

32. In which table are the check marks placed in all the correct boxes?




A.

	Quadrilateral	Rhombus	Polygon
			✓
			✓
	✓		✓




B.

	Quadrilateral	Rhombus	Polygon
	✓	✓	✓
			✓
	✓		✓

C.

	Quadrilateral	Rhombus	Polygon
	✓		
			
	✓		

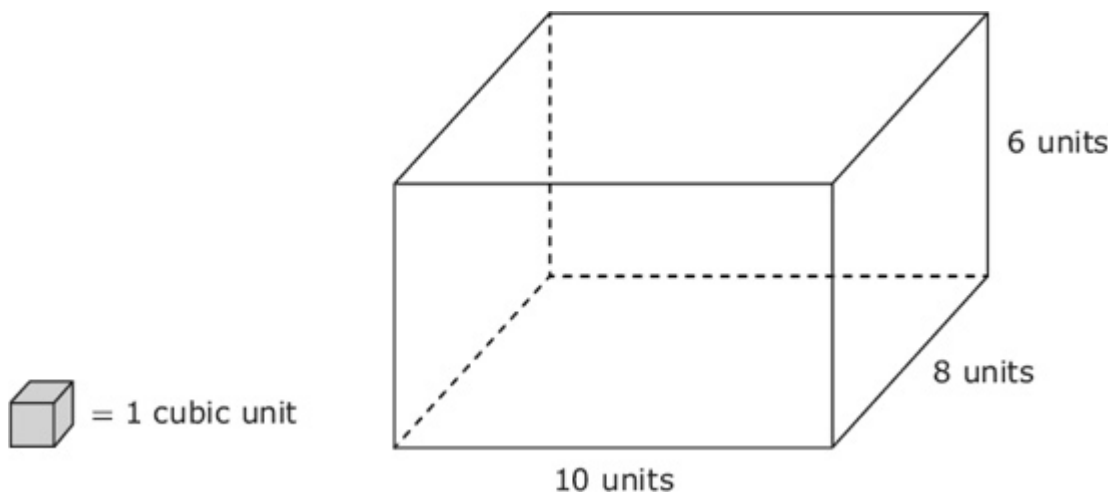
D.

	Quadrilateral	Rhombus	Polygon
			
			✓
			✓

33. Amy cut 32 feet of chain into pieces that were each $\frac{1}{4}$ ft long. How many of these pieces did Amy have after cutting the chain?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

34. The shaded cube has a volume of 1 cubic unit. Cubes like this one will be used to completely fill a rectangular prism that has the dimensions shown.



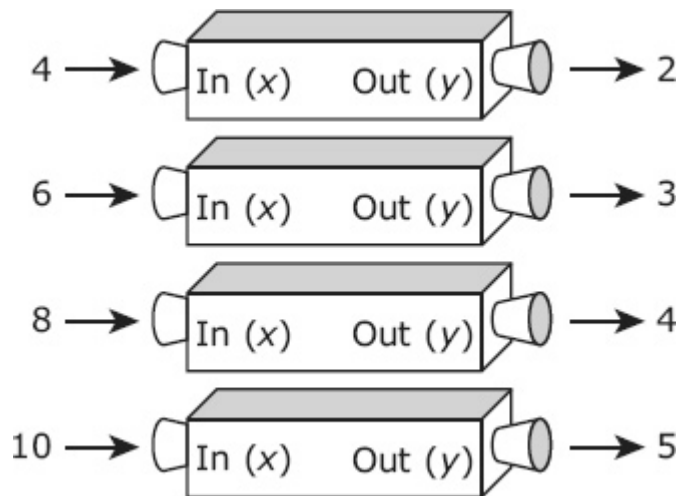
How many of these shaded cubes will be needed to completely fill the rectangular prism?

- A. 48
- B. 80
- C. 160
- D. Not here

35. Mr. Roosevelt has 48 nails that each weigh 1.35 ounces. What is the weight of these nails in ounces?

- A. 50.4 oz
- B. 40.4 oz
- C. 64.8 oz
- D. 16.2 oz

36. Henry used a number machine to create ordered pairs of numbers. Each number he put into the machine, x , came out as a different number, y , based on a rule. Some ordered pairs from Henry's machine are shown.



Which graph best represents the ordered pairs from Henry's number machine?

