Texas Education Agency

Beginning-of-Year Assessment (BOY)

Grade 3 Mathematics Standards

This BOY assessment is intended to assess current grade 4 students who completed grade 3 mathematics in the 2019-2020 school year.

Congratulations! You worked very hard in school to learn many new things. Taking this Grade 3 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!

Texas Education Agency

BOY Assessment Grade 3 Mathematics Standards

Student _____

Class _____

Date _____

1. Gerardo bought 3 packages of mint gum and 2 packages of bubble gum. Each package had 8 pieces of gum.

How many pieces of gum did Gerardo buy?

A. 26

B. 40

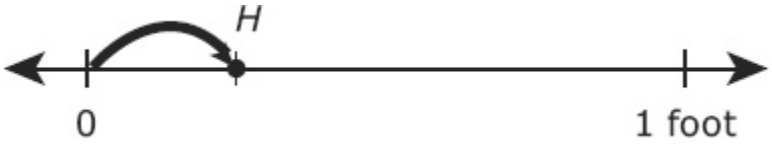
C. 12

D. 48

2. The number line represents a distance of 1 foot.

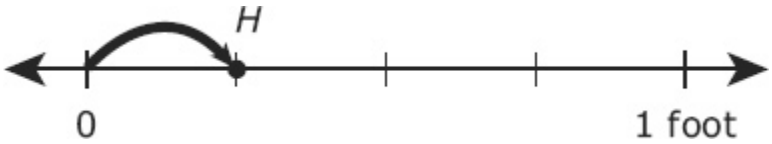
On which of these number lines does point *H* represent $\frac{1}{2}$ foot?

A.



B.

C.



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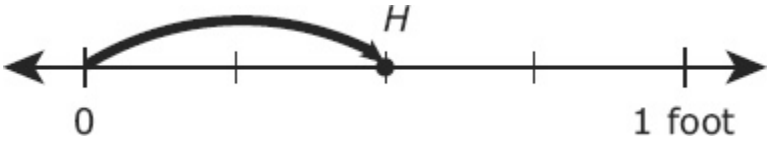


3. Gretchen made this table to show the side lengths and perimeters of three figures.

Gretchen's Figures

Figure	Side Lengths (yards)	Perimeter (yards)
Square	6, 6, 6, 6	24
Triangle	4, 7, 8	19
Rectangle	4, 8, 4, 8	32

What mistake, if any, did Gretchen make?

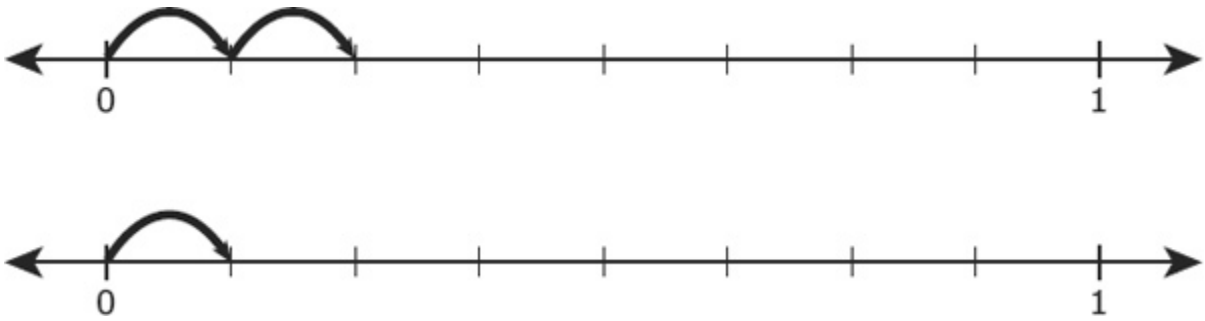
A. The perimeter of the rectangle should be 24 yards.

B. The perimeter of the square should be 36 yards.

C. The perimeter of the triangle should be 20 yards.

D. Gretchen did not make any mistakes in the table.

4. The number lines model two different fractions.



Which comparison of these fractions is true?

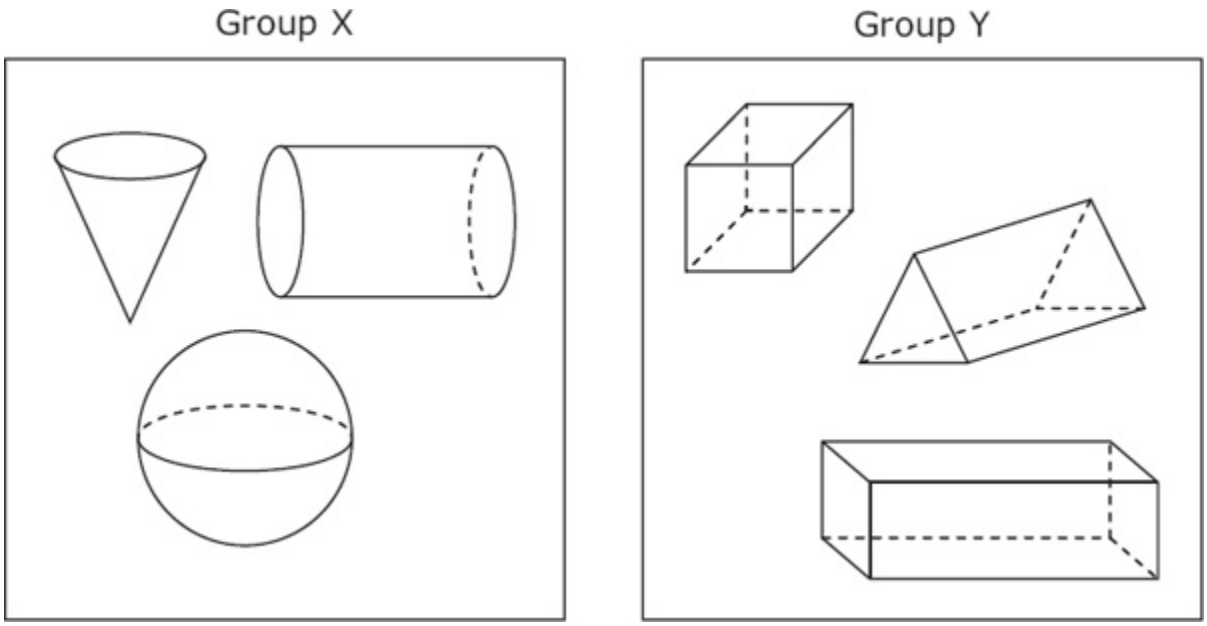
A. $\frac{1}{2} > \frac{1}{1}$

B. $\frac{2}{8} > \frac{1}{8}$

C. $\frac{1}{8} = \frac{2}{8}$

D. $\frac{2}{8} < \frac{1}{8}$

5. Zayne sorted some figures into two groups.



Which statement about the figures Zayne sorted is true?

A. All the figures in Group X are cylinders.

B. All the figures in Group X are cones.

C. All the figures in Group Y are prisms.

D. All the figures in Group Y are rectangular prisms.

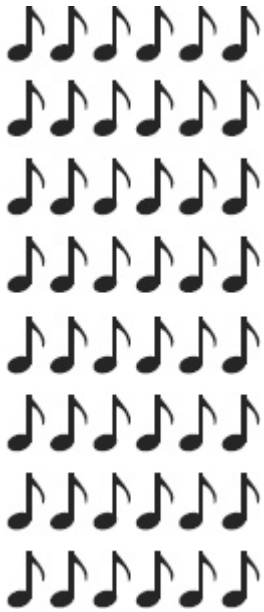
6. A band plays 8 songs at every show. Last year the band had 8 shows.

Which model can be used to find the number of songs the band played at shows last year?

A.

C.

B.



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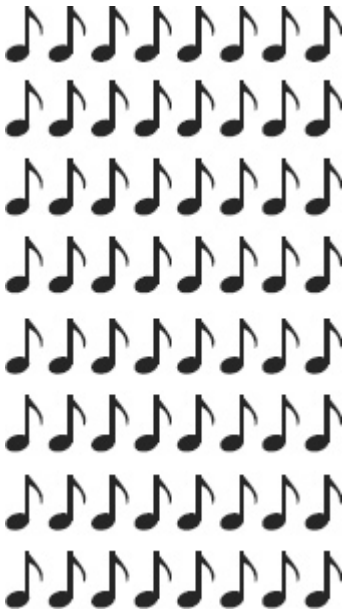
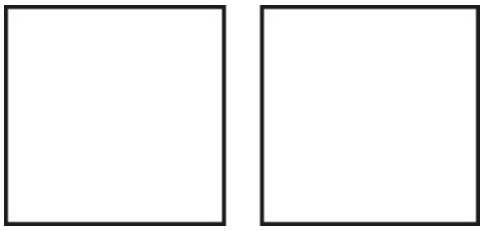


7. Brandon drew the two congruent squares shown.



- He divided one square into 2 congruent triangular parts.
- He divided the other square into 2 congruent rectangular parts.

Which statement is true?

A. Each triangular part and each rectangular part represents $\frac{1}{2}$ the area of one square.

B. Each triangular part has an area that is greater than the area of each rectangular part.

C. Each triangular part and each rectangular part represents $\frac{1}{4}$ the area of one square.

D. Each rectangular part has an area that is greater than the area of each triangular part.

8. Aaron will place 99 towels on a shelf. He will make 9 equal stacks.

How many towels will be in each stack?

Record your answer by filling in the bubbles. Be sure to use the correct place value.

9. Which number is odd?

A. 205

B. 350

C. 168

D. 514

10. Felix swam, rode his bike, and ran in a race.

- He spent 19 minutes swimming.
- He spent 21 minutes riding his bike.
- He spent 30 minutes running.

What was the total amount of time Felix spent swimming, riding his bike, and running in this race?

A. 1 hour 20 minutes

B. 40 minutes

C. 1 hour 10 minutes

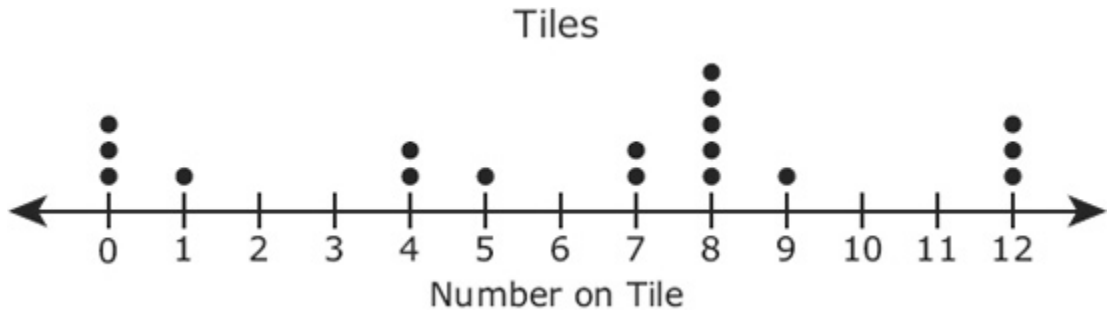
D. 1 hour

11. Merlin had a bag of tiles. Each tile was labeled with a number. Merlin pulled one tile out of the bag and recorded the number on that tile. He repeated this 18 times. The numbers on the tiles Merlin pulled are shown in the list.

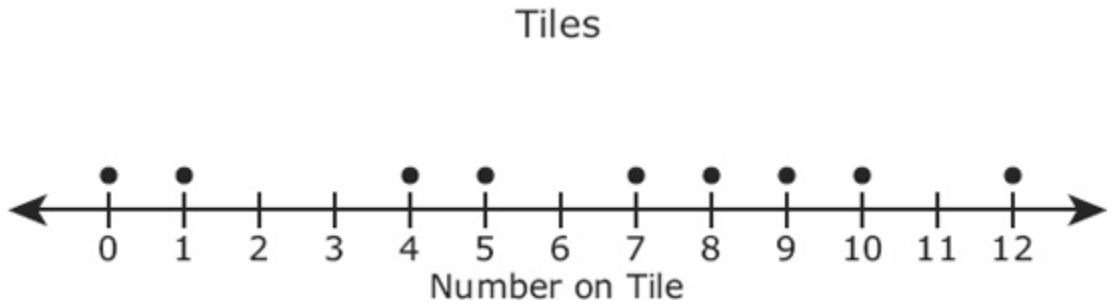
8, 7, 12, 1, 8, 9, 12, 0, 7, 8, 10, 4, 5, 8, 12, 4, 0, 8

Which dot plot represents the numbers on the tiles Merlin pulled out of the bag?

A.



B.



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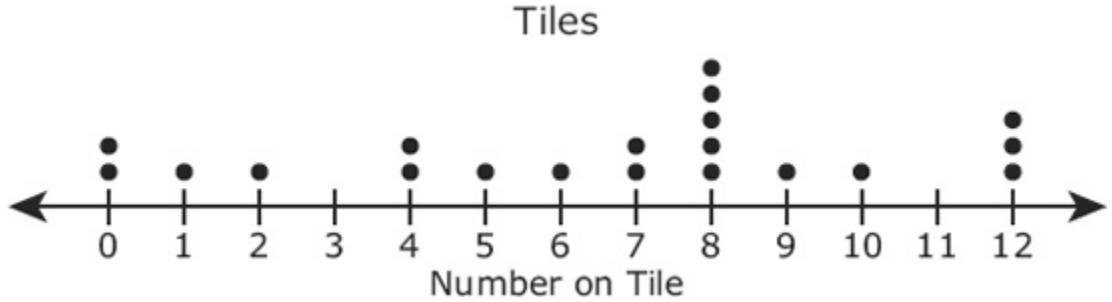

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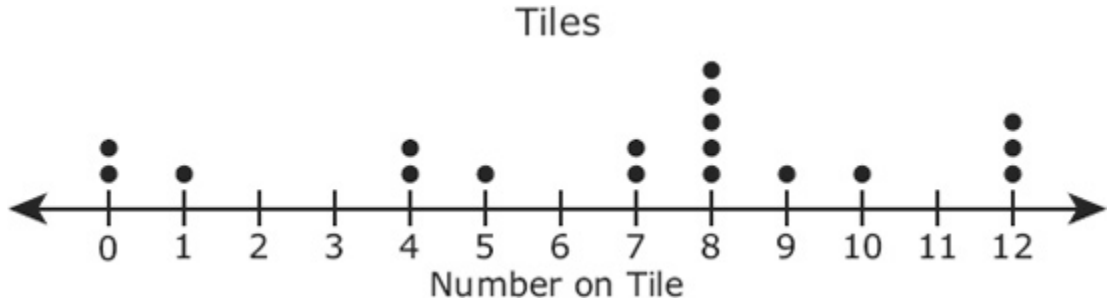


12. Patrick's class collected boxes of food for charity. Which unit of measurement should be used to measure the weight of the boxes of food?

A. Quarts

B. Pounds

C. Gallons

D. Fluid ounces

13. Tyrese had 572 baseball cards. He sold some of the baseball cards and then had 98 baseball cards left.

Which equation could NOT be used to find the number of baseball cards Tyrese sold?

A. 572 − □ = 98

B. 572 − 98 = □

C. 98 + □ = 572

D. 98 + 572 = □

14. Which expression represents the number 867?

A. 80 + 60 + 70

B. 800 + 6 + 7

C. 500 + 300 + 50 + 10 + 7

D. 500 + 300 + 60 + 70

15. Kevin and his two brothers ate a bowl of grapes. There were 27 grapes in the bowl. Each boy ate the same number of grapes.

What is the number of grapes each boy ate?

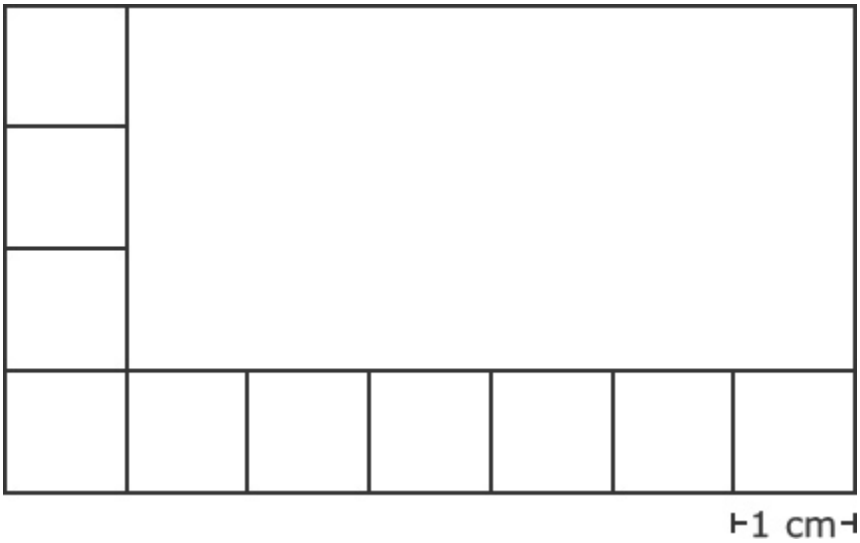
A. 54

B. 81

C. 7

D. 9

16. Felicia started placing square tiles inside a rectangle, as shown in the diagram. Each square tile has a side length of 1 cm.



She continued placing square tiles without any overlaps to cover the rectangle. What is the area of the rectangle in square centimeters?

Record your answer by filling in the bubbles. Be sure to use the correct place value.

17. The table shows the numbers of puzzle pieces in four puzzles. Derek put together the two puzzles that had the greatest numbers of pieces.

Puzzle Pieces

Puzzle	Number of Pieces
Lion	402
Boat	498
Garden	419
Waterfall	473

What is the total number of pieces in these two puzzles?

A. 961

B. 900

C. 861

D. Not here

18. The picture represents the trophies 3 brothers have on a shelf. Each brother won the same number of trophies.

What fraction of the trophies did each brother win?

A. $\frac{2}{3}$

B. $\frac{2}{6}$

C. $\frac{3}{6}$

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

19. There are a total of 36 bicycles in 6 rows at a bicycle shop. There are the same number of bicycles in each row. Which equation can be used to find the number of bicycles in each row?

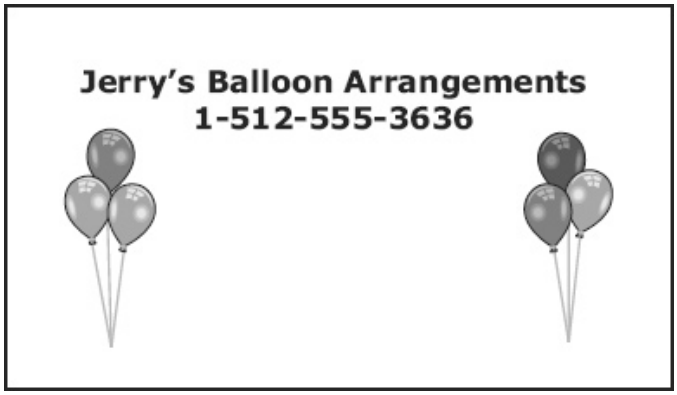
A. $6 \times 6 = 36$

B. $36 - 6 = 30$

C. $36 \times 6 = 216$

D. $6 + 6 = 12$

20. A rectangular business card is shown. Use the ruler provided to measure the length and width of the business card to the nearest centimeter.



Which measurement is closest to the perimeter of the business card in centimeters?

A. 14 cm

B. 28 cm

C. 45 cm

D. 32 cm

21. Kacie sold bracelets at a store. She sold 3 bracelets for 1 dollar.

Which table represents the numbers of bracelets that would be sold for different numbers of dollars?

A.

Bracelets Sold

Number of Dollars	Number of Bracelets
1	3
2	4
4	6
5	10

B.

Bracelets Sold

Number of Dollars	Number of Bracelets
1	3
2	6
4	12
5	15

C.

Bracelets Sold

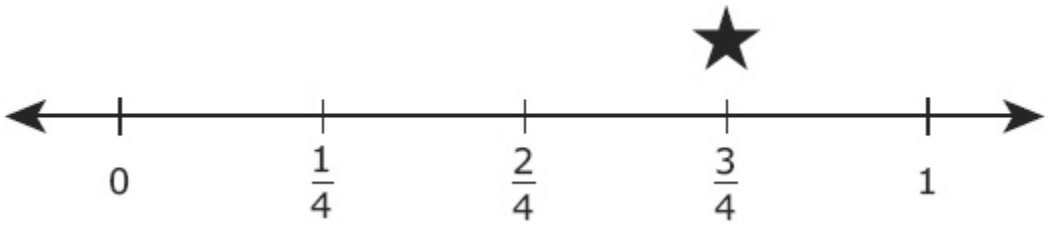
Number of Dollars	Number of Bracelets
3	1
4	2
6	4
10	5

D.

Bracelets Sold

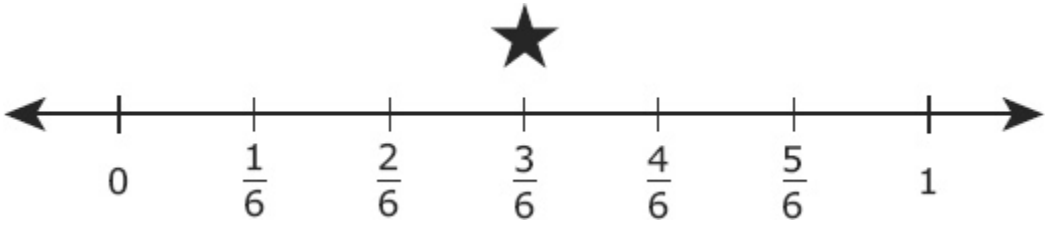
Number of Dollars	Number of Bracelets
3	1
6	2
12	4
15	5

22. Eddie marked the fraction $\frac{3}{4}$ with a star on the number line shown.

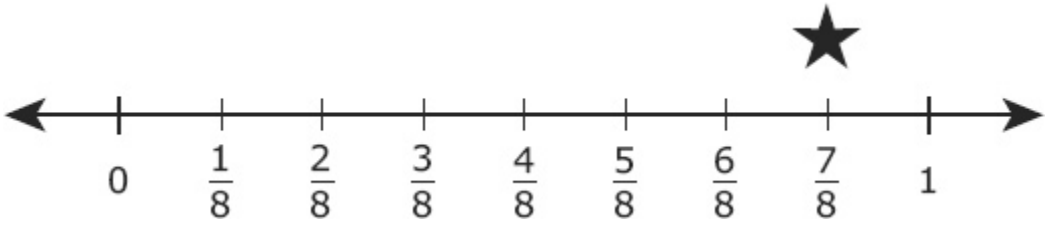


Which of these number lines shows a fraction equivalent to $\frac{3}{4}$ marked with a star?

A.



B.



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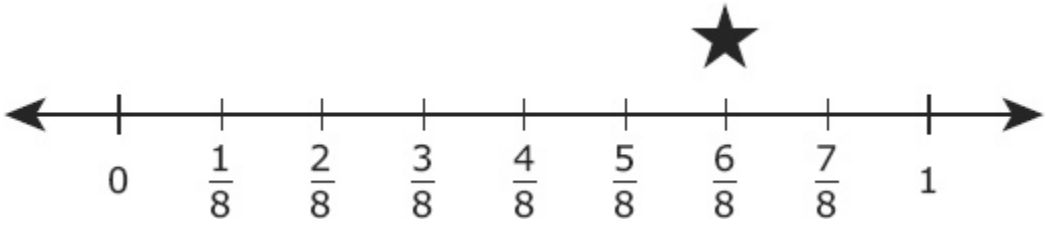
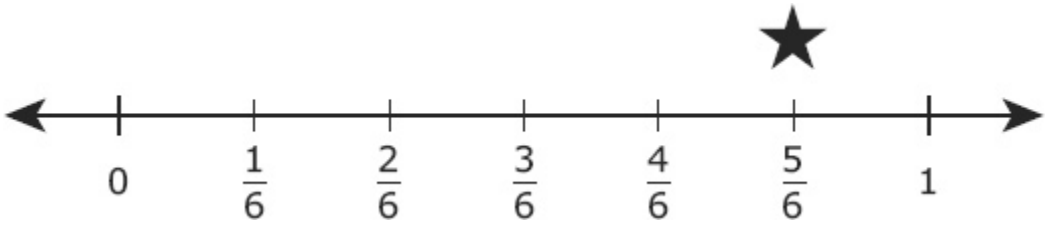


D.



23. There are 6 photographs on each page of an album. One page of the album is shown.

How many photographs are on 9 pages of the album?

A. 48

B. 45

C. 15

D. 54

24. A school keeps boxes of paper of different colors in a room. The table shows how many boxes of each color are in the room.

Boxes of Paper

Color	Number
White	48
Yellow	24
Blue	42
Red	18

Which answer choice does NOT represent the information in the table?

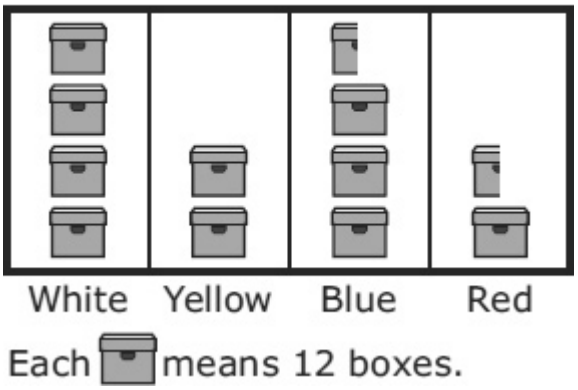
A.

Boxes of Paper

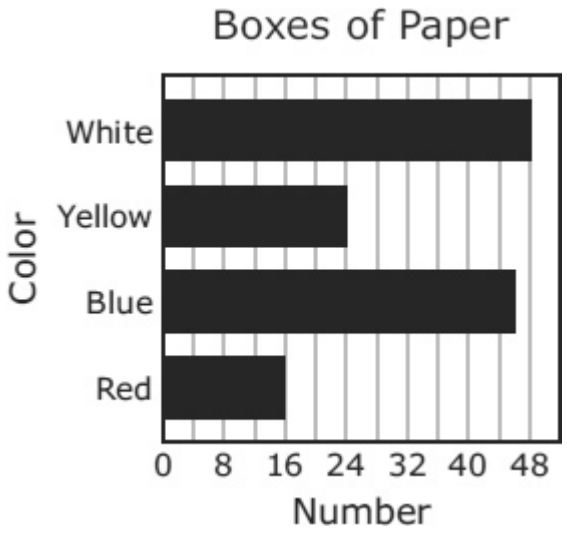
Color	Number
White	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III
Yellow	𝍸 𝍸 𝍸 𝍸 IIII
Blue	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II
Red	𝍸 𝍸 𝍸 III

B.

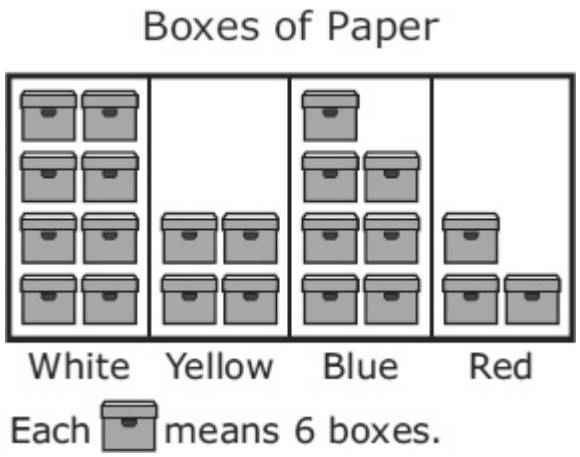
Boxes of Paper



C.


Boxes of Paper
White
Yellow
Blue
Red
Color
0 8 16 24 32 40 48
Number

D.


Boxes of Paper
White
Yellow
Blue
Red
Each means 6 boxes.

25. To make posters, 6 students each collected 8 pictures of animals. The students put 4 animal pictures on each poster they made. Which equation shows one way to find the number of posters the students made?

A. $6 + 8 + 4 = 18$

B. $6 \times 8 \div 4 = 12$

C. $6 \times 8 \times 4 = 192$

D. $6 + 8 - 4 = 10$

26. The frequency table shows the number of points scored by each player on a basketball team during a game.

Points Scored

Player	Tally
Stephen	卌 卌 IIII
Alfred	IIII
Kenji	卌 卌 II
Pete	卌 III
Eric	卌 卌 II
Wesley	卌 I
Hayes	卌 卌

What is the combined number of points scored by Stephen, Alfred, Pete, and Wesley?

Record your answer by filling in the bubbles. Be sure to use the correct place value.

27. Which answer choice does NOT describe the number 7,140?

A. The sum of seven thousands and fourteen tens

B. The sum of seven thousands, one hundred, and forty tens

C. The sum of seven thousands, one hundred, and four tens

D. The sum of seven thousands, one hundred, and forty ones

28. There are 18 spoons in a drawer. This expression represents the number of forks in the same drawer.

$$2 \times 18$$

Which statement is true?

A. There are 2 more spoons than forks in the drawer.

B. There are 2 more forks than spoons in the drawer.

C. There are 2 times as many forks as spoons in the drawer.

D. There are 2 times as many spoons as forks in the drawer.

29. The list shows three clues about a number.

- The number is greater than 85,629.
- The number is less than 88,231.
- The number has a digit greater than 6 in the hundreds place.

Which of these could be the number described?

A. 88,165

B. 85,625

C. 88,930

D. 87,720

30. There are a total of 294 restaurants in a city.

- Of these restaurants, 196 are along the highways, and 49 are downtown.
- The rest of the restaurants are in shopping malls.

Which model can be used to find the number of restaurants in the city that are in shopping malls?

A.

?		
294	196	49

B.

294		
196	49	?

C.

196		
294	49	?

D.

49		
294	196	?

31. Charlie emptied his piggy bank and counted $5.63 in savings. Which set of bills and coins could **not** be the total amount of money that was in Charlie's piggy bank?

A.

B.

C.

D.

32. What number goes in the $\square$ to make a true statement?

$$\square \times 5 = 45$$

A. 50

B. 8

C. 9

D. 40

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