

Grade 5 Form M

Student Name

Teacher Name


Sample 1: Exactly how many sides does a triangle have?


- A. 2
- B. 3
- C. 4
- D. 5

Sample 2: Identify whether each number sentence is True or False.

- a* $3 \times 4 = 12$ (T) True (F) False
- b* $18 \div 3 = 6$ (T) True (F) False
- c* $4 \times 5 = 9$ (T) True (F) False

 **Sample 3:** What is $10 + 14$?

 **Sample 4:** What decimal number is represented by the phrase “four and five tenths”?

 This symbol appears next to questions that require you to fill in your answers on a grid on the Answer Sheet. Directions for completing the Response Grid:

1. Work the problem and find an answer.
2. Write your answer in the answer boxes at the top of the grid.
For whole-number grids:
 - Print your answer with the first digit in the answer box all the way to the left, OR with the last digit in the answer box all the way to the right.
 - Print only one digit in each answer box. Do NOT leave a blank answer box in the middle of an answer.For decimal grids:
 - Use the decimal point to decide where to start printing your answer.
3. Fill in a bubble under each answer box that you used to write your answer.
 - Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.
 - Fill in each bubble by making a solid black mark that completely fills the circle.
 - You MUST fill in the bubbles accurately to receive credit for your answer.

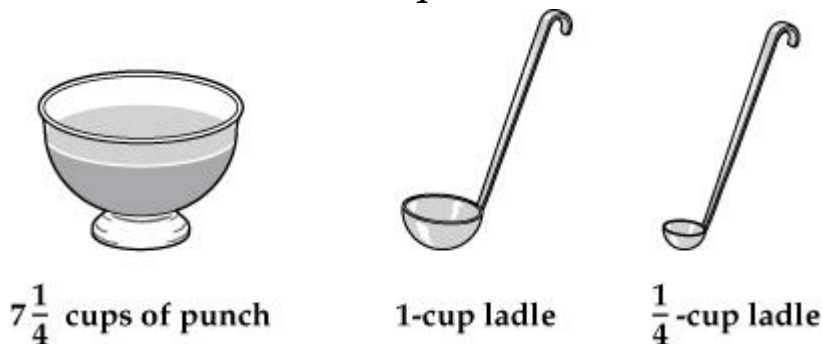
Use the blank space in this Test Booklet to do your work. Then mark your Answer Sheet for the answer you have chosen.

1. What number should fill in the ____ to make this number sentence true?

$$6 + 3 + 7 = \underline{\hspace{1cm}} + 7$$

- A. 3
- B. 9
- C. 16
- D. 23

2. Hilary is serving punch out of a bowl using a 1-cup ladle and a $\frac{1}{4}$ -cup ladle. Before she begins serving, the bowl is filled with $7\frac{1}{4}$ cups of punch.



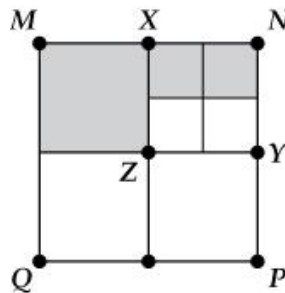
Which combination of servings would completely empty the punch bowl?

- A. two(2) 1-cup servings and twelve(12) $\frac{1}{4}$ -cup servings
- B. two(2) 1-cup servings and five(5) $\frac{1}{4}$ -cup servings
- C. six(6) 1-cup servings and five(5) $\frac{1}{4}$ -cup servings
- D. six(6) 1-cup servings and one(1) $\frac{1}{4}$ -cup serving

Sometimes it is helpful to name a number in different ways. For example, the number 35 might be renamed as 3 tens + 5 ones. For numbers 3–6, identify whether each way to rename the number 6,184 is correct.

- | | | | |
|----|---|---------|--------|
| 3. | 61 hundreds + 84 ones | (Y) Yes | (N) No |
| 4. | 6 thousands + 8 tens + 4 ones | (Y) Yes | (N) No |
| 5. | 61 hundreds + 8 tens + 40 tenths | (Y) Yes | (N) No |
| 6. | 6 thousands + 1 hundred + 8 tens + 4 ones | (Y) Yes | (N) No |

7. Square $MNPQ$ is divided equally into four squares, and square $XNYZ$ is divided equally into four smaller squares, as shown below.



What fraction of square $MNPQ$ is shaded?

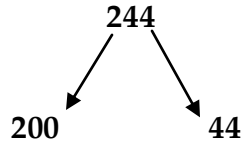
- A. $\frac{1}{2}$
- B. $\frac{1}{4}$
- C. $\frac{3}{8}$
- D. $\frac{3}{4}$

8. Gabe's math assignment was to show his work for the following problem.

What is $\frac{1}{4}$ of 244 ?

The steps he took to solve the problem are shown below. If there is a mistake in his work, mark the letter that matches the Step in which he made his first mistake. If Gabe made no mistake, mark the letter D.

Step 1: I separated 244 into two parts as shown below.



Step 2: I know that $\frac{1}{4}$ of 200 is 50 and $\frac{1}{4}$ of 44 is 11.

Step 3: Therefore, $\frac{1}{4}$ of 244 is equal to $50 + 11$, which is 61.

- A. Step 1
- B. Step 2
- C. Step 3
- D. There is no mistake.



9. Dex plays a number game. You give him a number and he —

- doubles the number
- adds 6 to that answer
- subtracts 3 from that answer.

Dex then reports what he gets as the result of these three actions.

What number should you give Dex so that he reports 35 as the result?

Use the following information to answer numbers 10–11.

Lin is going to the county fair tonight. His mother gave him \$24 to spend on ride tickets. Tickets for fast rides cost \$3 each, and tickets for slow rides cost \$2 each.



10. Lin plans to spend all of the money his mother gave him on fast-ride tickets. What is the total number of fast-ride tickets that Lin can buy?



11. Which statement could represent the word problem above?

- A. number of fast-ride tickets = 24×3
- B. number of fast-ride tickets = $24 \div 3$
- C. number of fast-ride tickets = 24×2
- D. number of fast-ride tickets = $24 \div 2$

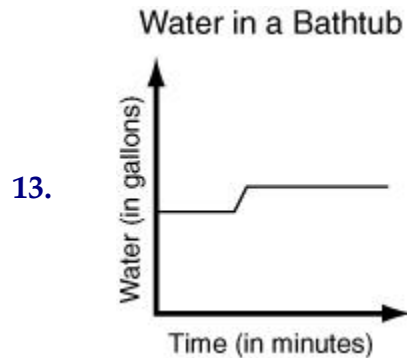
12. What is the total number of different factors for the number 24 ?

- A. 8
- B. 6
- C. 4
- D. 2

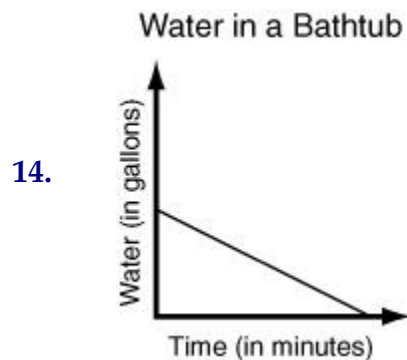
For numbers 13–16, think about gallons of water in a bathtub. Tim can turn the faucet on to add water to the tub, and he can open the drain to let water out.



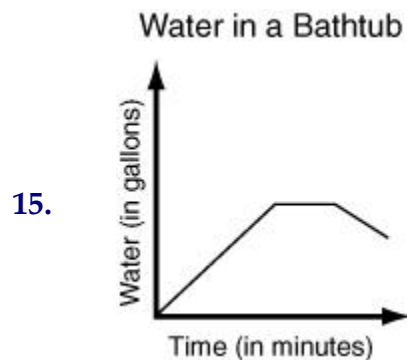
The graphs below show the amount of water in the bathtub over time. Each graph has a description that best matches the graph. Match each description with its graph by marking the correct letter (A, B, C, D) on your Answer Sheet for each graph (14, 15, 16, 17).



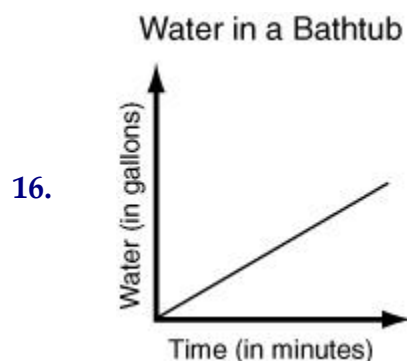
- A. Tim turned the faucet on to add water to the bathtub at a constant rate.



- B. Tim filled the bathtub with water and turned off the faucet. After a couple minutes, he decided the tub was too full. He opened the drain to let some water out of the tub.



- C. Tim's mother had already put water into the bathtub for Tim's bath. Once Tim stepped in the tub, he decided the water was too cool. He then turned on the faucet for one minute to add more hot water.



- D. Tim opened the drain to empty all the water from the bathtub at a constant rate.

Use the following information to answer numbers 17–20.

Jenna knows that she could solve the following multiplication problem using several different methods and still get the correct answer.

$$\begin{array}{r} 49 \\ \times 5 \\ \hline \end{array}$$

Which of the following methods would result in a correct answer for this problem?

- | | | | |
|-----|---|---------|--------|
| 17. | Multiply 50 and 5, and then subtract 5. | (Y) Yes | (N) No |
| 18. | Multiply 50 and 5, and then subtract 49. | (Y) Yes | (N) No |
| 19. | Multiply 9 and 5, then multiply 4 and 5, and then add the two products together. | (Y) Yes | (N) No |
| 20. | Multiply 40 and 5, then multiply 9 and 5, and then add the two products together. | (Y) Yes | (N) No |

Use the following information to answer numbers 21–25.

Harry has a box of 24 crayons. He shares his crayons with 3 friends so that he and his friends each have 6 crayons. Based on this situation, determine whether each of the following statements must be true.

21. Each child now has more than $\frac{1}{2}$ of the original number of crayons.

(Y) Yes (N) No

22. Each child now has exactly $\frac{1}{6}$ of the original number of crayons.

(Y) Yes (N) No

23. Each child now has more than 0.75 of the original number of crayons.

(Y) Yes (N) No

24. Each child now has less than 0.50 of the original number of crayons.

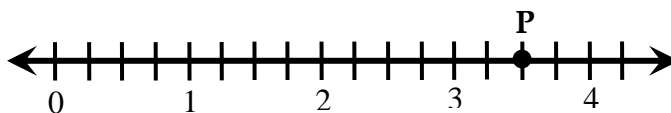
(Y) Yes (N) No

25. Each child now has exactly $\frac{1}{4}$ of the original number of crayons.

(Y) Yes (N) No



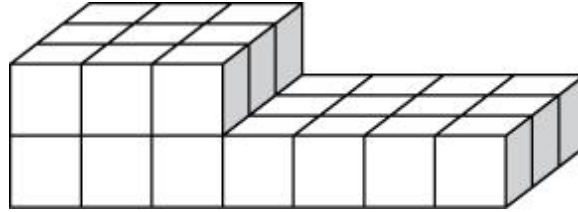
26. Look at the following number line.



What decimal number is represented by point P ?



27. Izzy made the figure shown below by stacking together some centimeter cubes.




What is the volume, in cubic centimeters, of Izzy's stack of cubes?

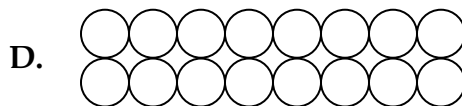


28. A rectangle has a perimeter of 40 inches. The width of the rectangle is 8 inches. What is the length of this rectangle?



29. If $a + b = 5$, what does $18 + b + a$ equal?

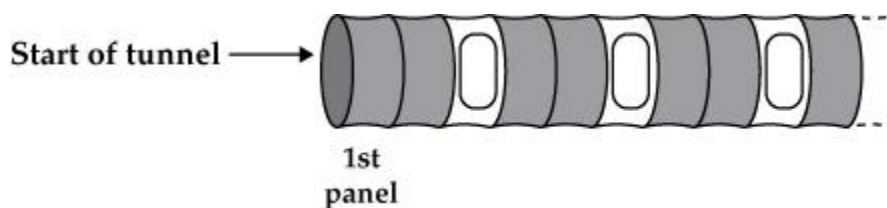
- A. 13
- B. 23
- C. 28
- D. 33

30.  represents $\frac{1}{4}$ of a set of circles. Which of the following could represent the whole set of circles?



Use the following information to answer numbers 31–34.

A play tunnel is made by repeating groups of three panels using solid panels  and window panels  as described in the picture below. The picture shows the first ten panels of the tunnel.



31. Which section of panels below continues the pattern in this tunnel for the 11th through 13th panels?



For each of the following patterns, determine whether it follows the same rule as the pattern in the play tunnel above.

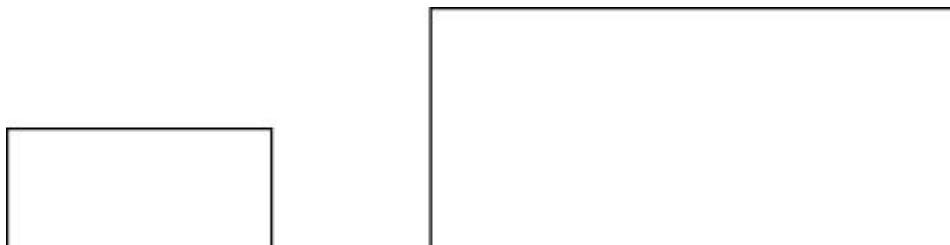
32. G G R G G R G G R G . . . (Y) Yes (N) No

33.          . . . (Y) Yes (N) No

34.            . . . (Y) Yes (N) No

Use the information below to answer numbers 35–38.

Dana drew two rectangles. The length of the larger rectangle is 2 times the length of the smaller rectangle. The width of the larger rectangle is 2 times the width of the smaller rectangle.



Identify whether each statement about these rectangles is True or False.

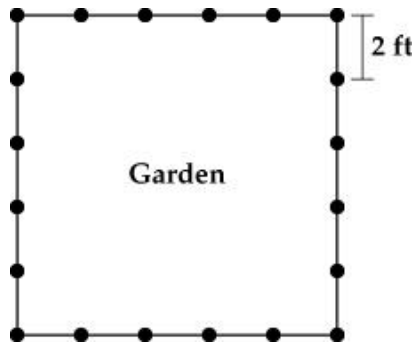
35. The area of the larger rectangle is 2 times the area of the smaller rectangle.
(T) True (F) False
36. The area of the larger rectangle is 4 times the area of the smaller rectangle.
(T) True (F) False
37. The perimeter of the larger rectangle is 2 times the perimeter of the smaller rectangle.
(T) True (F) False
38. The perimeter of the larger rectangle is 4 times the perimeter of the smaller rectangle.
(T) True (F) False

For numbers 39–40, determine whether each equation is true.

39. $0.56 = \frac{5}{6}$ (Y) Yes (N) No
40. $1.6 = 1\frac{3}{5}$ (Y) Yes (N) No

Use the information below to answer numbers 41–43.

Mr. Reyes built a fence to enclose his square garden. He used 20 fence posts and placed them 2 feet apart, as shown below.



41. Based on this information, which statement must be true?
- A. The length of the garden is greater than the width of the garden.
 - B. The width of the garden is greater than the length of the garden.
 - C. The value of the perimeter is greater than the value of the area of the garden.
 - D. The value of the area is greater than the value of the perimeter of the garden.

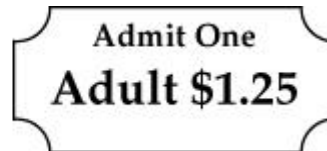
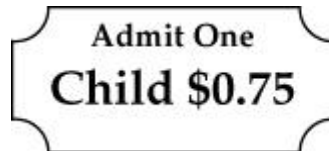


42. What is the perimeter, in feet, of the garden?



43. What is the area, in square feet, of the garden?

-  44. Madison is planning to go to the museum. Prices for museum tickets are shown below.



Madison's mother told her she could invite some friends to go with her to the museum as long as the total cost for tickets is not more than \$6.00. Madison's mother is the only adult going with them to the museum.

What is the maximum number of child tickets that Madison's mother can buy after purchasing one adult ticket using her \$6.00?

