

Name: \_\_\_\_\_

Date: \_\_\_\_\_

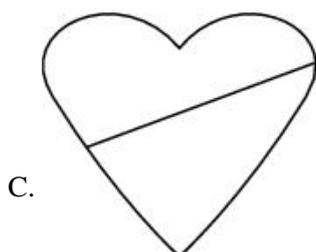
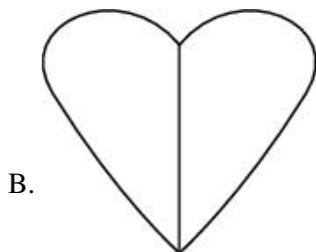
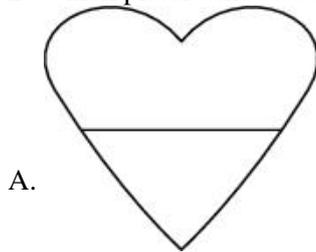
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1.

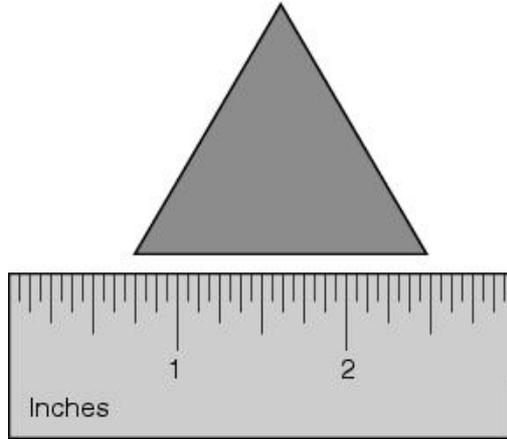
Ethan is making a necklace. He has only 16 glass beads. He wants to know all the factors of 16 so he can create a longer necklace with a pattern of the glass beads and gold spacers he has. Which shows all the factors of 16?

- A. 0, 2, 3, 8, 16
  - B. 1, 2, 4, 8, 16
  - C. 0, 1, 2, 4, 8, 16
  - D. 1, 2, 3, 4, 8, 9, 16
- 

2. Which picture shows a line of symmetry?



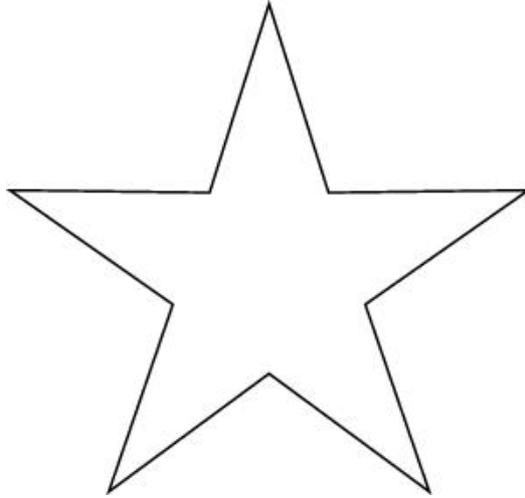
3. Look at the equilateral triangle below.



Use the ruler to help you determine the perimeter of the triangle.

- A.  $1\frac{3}{4}$  inches
  - B.  $4\frac{1}{2}$  inches
  - C.  $5\frac{1}{4}$  inches
  - D.  $7\frac{1}{2}$  inches
-

4. The star below has rotational symmetry.



Which of these is the angle of rotation for this star?

- A.  $5^\circ$
  - B.  $72^\circ$
  - C.  $90^\circ$
  - D.  $108^\circ$
- 

5.

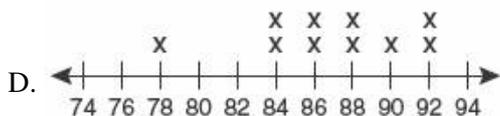
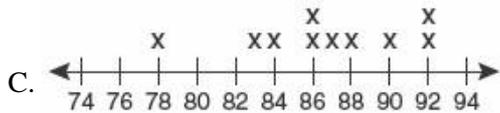
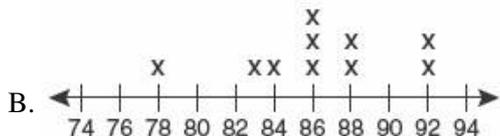
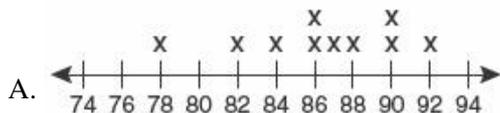
If you wanted to find out how much water you could pour into a cylindrical bucket, which type of measurement would you want to calculate?

- A. perimeter of the bucket
  - B. area of the bucket
  - C. volume of the bucket
  - D. circumference of the bucket
-

6. Sam listed his scores from history class.

84, 86, 83, 78, 92, 87, 92, 90, 88, 86

Which line plot correctly displays his scores?



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7. Lindsey wants to build a rectangular pen for her dog. She wants the pen to measure 30 feet long and 6 feet wide. How much fencing does she need?

- A. 36 feet
- B. 36 square feet
- C. 72 feet
- D. 72 square feet

8.

Jamie is forming a cylinder out of two circles and a rectangle. The area of each circle is  $4\pi$ . The diameter of each circle is 4 cm. The height of the rectangle is 6 cm. Which shows how Jamie could calculate the surface area the cylinder?

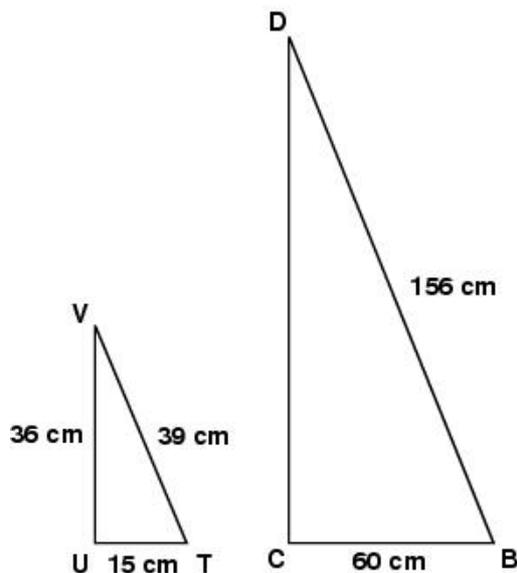
- A.  $2(4\pi) + 6(4\pi)$
- B.  $2(4\pi) + 6(4)$
- C.  $4\pi \times 4 \times 6\pi$
- D.  $4\pi \times 4 \times 6$

9.

Leonardo is making gift packages. He has a cone shaped package and a cylindrical package. The cone and cylinder have the same radius and height. He wants to use the package with the greatest volume. Which package should Leonardo use?

- A. the cone
  - B. the cylinder
  - C. The cone and cylinder have equal volumes.
  - D. There is not enough information to tell.
- 

10. Look at the two triangles below. They have the following relationship:  $\triangle TUV \sim \triangle BCD$ .



What is the length of  $\overline{CD}$ ?

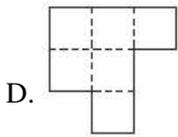
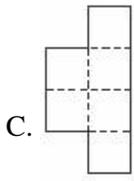
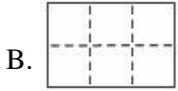
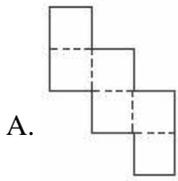
- A. 81 cm
  - B. 120 cm
  - C. 144 cm
  - D. 153 cm
- 

11.

Karmen eats  $\frac{1}{4}$  of a pint of ice cream. Ben eats  $\frac{2}{3}$  of his pint of ice cream. How many total pints of ice cream have been eaten.

- A.  $\frac{11}{12}$
  - B.  $\frac{3}{4}$
  - C.  $\frac{5}{8}$
  - D.  $\frac{5}{12}$
-

12. Which of the following nets can be folded along the dashed lines to form a cube?



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13. If  $m$  varies directly as  $p$ , and  $m = 5$  when  $p = 7$ , what is the constant of variation?

A. 35

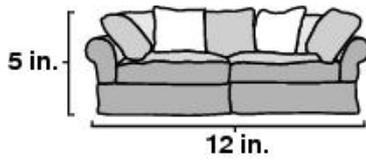
B. 12

C.  $\frac{7}{5}$

D.  $\frac{5}{7}$

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14.

**SCALE 1 in. = .75 ft.**

What would the actual height of the couch be?

- A. 3.75 ft
  - B. 4.25 ft
  - C. 5.75 ft
  - D. 9.00 ft
- 

15.

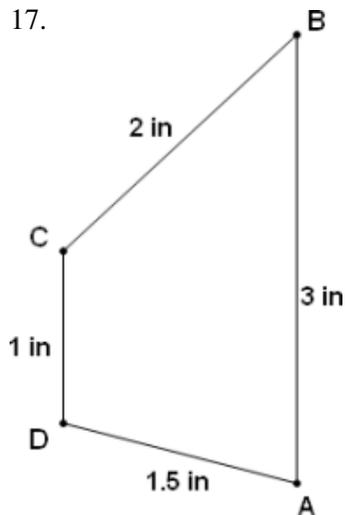
A cylindrical container has a radius of 6cm. The container is holding  $255 \text{ cm}^3$  of water. Rounded to the nearest quarter inch, what is the MINIMUM height of the container?

- A.  $2\frac{1}{4}$  cm
  - B. 7 cm
  - C.  $11\frac{3}{4}$  cm
  - D.  $13\frac{1}{2}$  cm
- 

16. Which fraction is the same as 0.75?

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

17.



A scale drawing of Martha's garden is shown. The actual length of side AB is 25 feet. What is the actual length of side CB?

- A.  $16\frac{2}{3}$  feet
  - B.  $12\frac{1}{2}$  feet
  - C. 22 feet
  - D.  $37\frac{1}{2}$  feet
- 

18.

One-third of the fish in an aquarium are blue. There are 10 blue fish in the aquarium. How many total fish are in the aquarium?

- A. 13
  - B. 10
  - C. 30
  - D. 60
- 

19. Old Faithful, the famous geyser in Yellowstone National Park, erupts every hour and sends 15,000 gallons of steam and boiling water into the air. At the end of one entire day, how many gallons of water and steam would Old Faithful have sent into the air?

- A. 360,000 gallons
  - B. 180,000 gallons
  - C. 153,000 gallons
  - D. 36,000 gallons
-

20. If  $y$  varies directly as  $x$ , what is the equation for the direct variation shown in the table below?

$x$	-2	-1	0	1	2
$y$	-14	-7	0	7	14

A.  $y = \frac{1}{7}x$

B.  $y = 7x$

C.  $y = \frac{7}{x}$

D.  $7y = x$

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21.

**Solve.**

$m + 12 - n = \square$ , if  
 $m = 5$  and  $n = 3$

A. 8

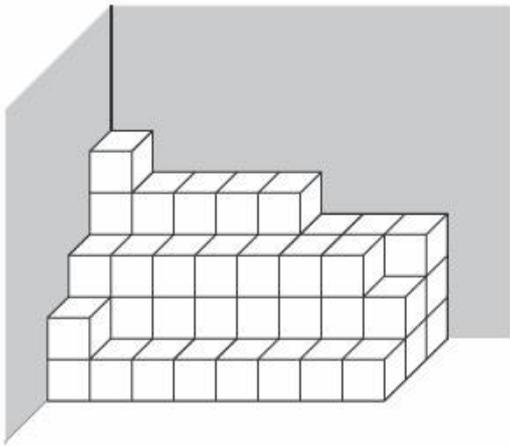
B. 10

C. 14

D. 20

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22. This drawing shows cubic boxes stacked in the corner of a warehouse.



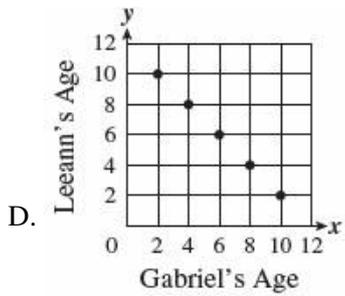
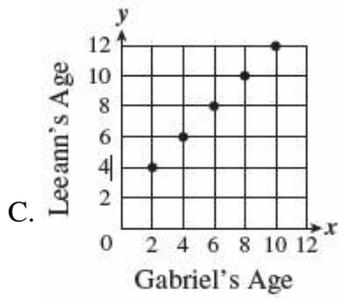
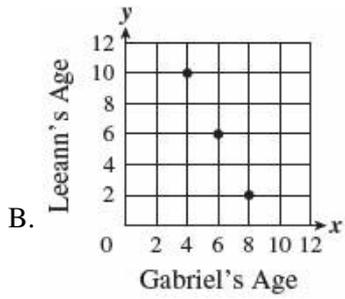
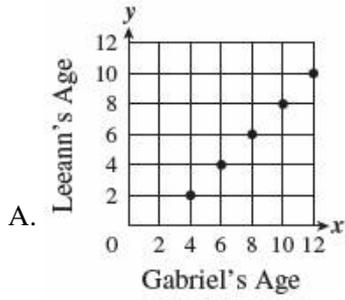
If each box will hold 8 cubic feet, what is the total capacity of the stack of boxes?

- A. 488 cubic feet
- B. 496 cubic feet
- C. 504 cubic feet
- D. 512 cubic feet

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23. Gabriel is 2 years older than his sister, Leeann. Which of the following graphs correctly represents the relationship between Gabriel's age and Leeann's age, in years?



24. Which pair of numbers continues the pattern shown in this sequence?

**16, 23, 22, 29, 28, 35, 34, \_\_\_\_, \_\_\_\_**

- A. 39, 40
  - B. 41, 40
  - C. 43, 40
  - D. 45, 40
- 

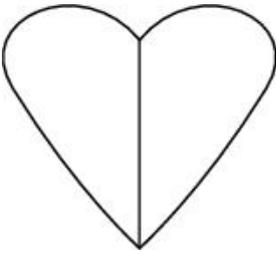
25. **How many different lines of symmetry does a square have?**

- A. 1
- B. 2
- C. 3
- D. 4

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**Answer Key**

1. B) 1, 2, 4, 8, 16

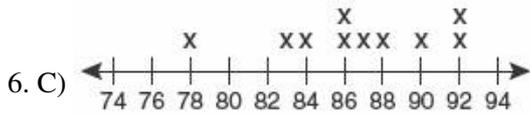


2. B)

3. C)  $5\frac{1}{4}$  inches

4. B)  $72^\circ$

5. C) volume of the bucket



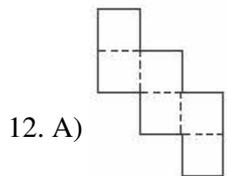
7. C) 72 feet

8. A)  $2(4\pi) + 6(4\pi)$

9. B) the cylinder

10. C) 144 cm

11. A)  $\frac{11}{12}$



13. D)  $\frac{5}{7}$

14. A) 3.75 ft

15. A)  $2\frac{1}{4}$  cm

16. C)  $\frac{3}{4}$

17. A)  $16\frac{2}{3}$  feet

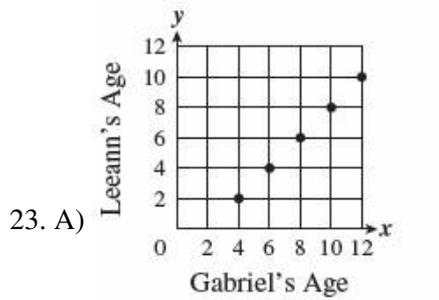
18. C) 30

19. A) 360,000 gallons

20. B)  $y = 7x$

21. C) 14

22. B) 496 cubic feet



24. B) 41, 40

25. D) 4