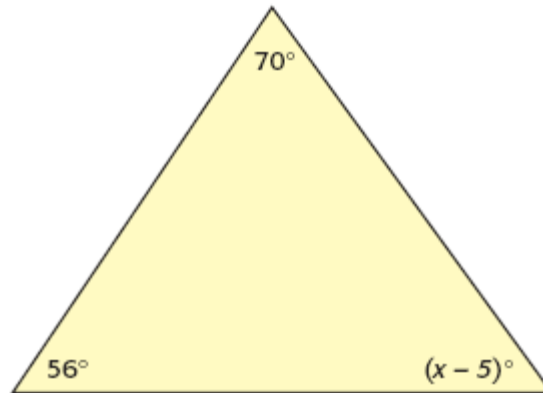


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## Question 1



What is the value of  $x$  in the triangle shown?

- A. 54
- B. 59
- C. 49
- D. 24

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**< 2 of 35 >****Question 2**

Last year there were 80 students enrolled in the eighth-grade class. This year the number of students enrolled in the eighth-grade class increased by 10%.

How many students are enrolled in the eighth-grade class this year?

- A. 88
- B. 8
- C. 90
- D. 81

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## Question 3

A company packs its coffee into cylindrical containers. The height of each container is 6 inches, and the radius of the container is 3 inches.

Which is closest to the volume of one of these cylindrical containers?  
(Use 3.14 for  $\pi$ .)

- A. 36 cubic inches
- B. 113 cubic inches
- C. 54 cubic inches
- D. 170 cubic inches

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**< 4 of 35 >****Question 4**



The student council is making snack bags for a class trip. Each snack bag will contain:

- 1 type of drink
- 1 type of cookie
- 1 type of fruit

To make each snack bag, they will choose from 2 types of drinks, 4 types of cookies, and 2 types of fruit.

How many combinations of 1 type of drink, 1 type of cookie, and 1 type of fruit are possible?

- A. 48
- B. 8
- C. 3
- D. 16

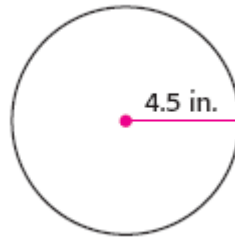
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## Question 5



Which is closest to the circumference of this circle?  
(Use 3.14 for  $\pi$ .)

- A. 14 inches
- B. 63 inches
- C. 20 inches
- D. 28 inches

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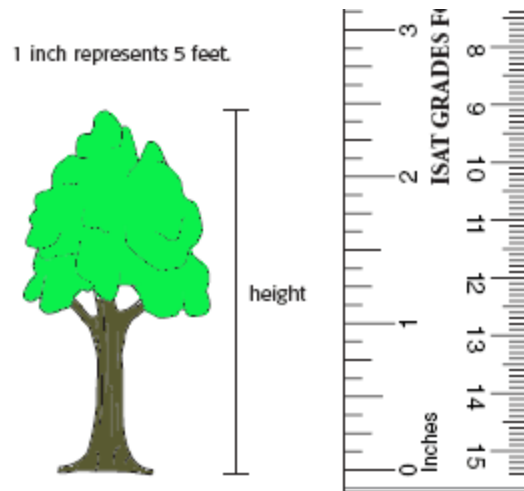
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## Question 6

Use your inch ruler to help you answer this question.

The picture shows the scale drawing of a tree.



Which is closest to the height in feet of the actual tree?

- A. 15 feet
- B.  $10\frac{1}{2}$  feet
- C.  $12\frac{1}{2}$  feet
- D. 10 feet

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## Question 7

Which of the following is equivalent to the expression shown?

$$4x - 5 - 2x - 3$$

- A.  $6x + 2$
- B.  $2x + 2$
- C.  $6x - 8$
- D.  $2x - 8$

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## Question 8

Between which two consecutive integers is  $\sqrt[3]{300}$  ?

- A. 6 and 7
- B. 100 and 101
- C. 75 and 76
- D. 17 and 18

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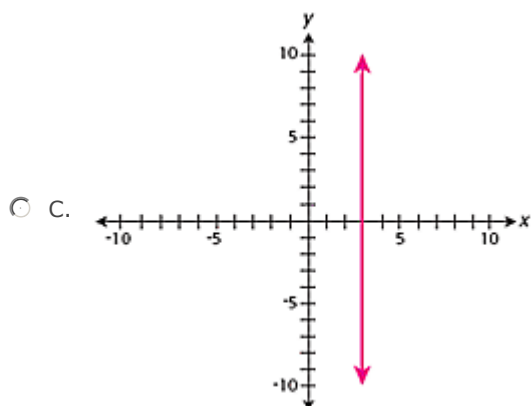
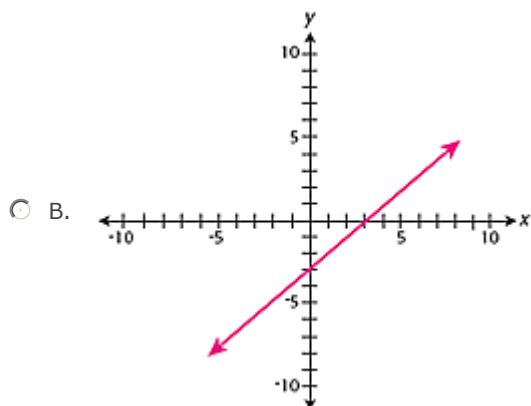
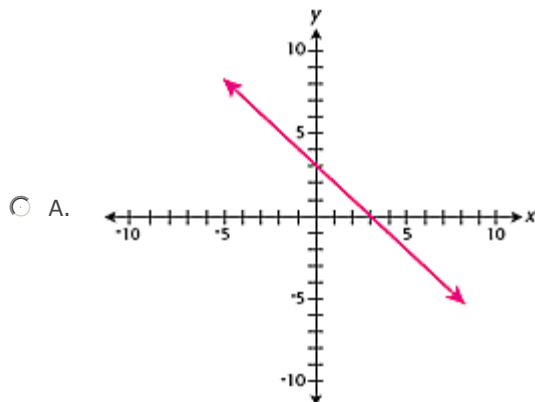
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## Question 9

Which represents the graph of  $y = 3$ ?



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## Question 10



Amy has  $\frac{3}{4}$  of a yard of string to make bracelets. Each bracelet requires  $\frac{1}{8}$  of a yard of string.

What is the greatest number of bracelets Amy can make with this length of string?

- A. 3
- B. 6
- C. 4
- D. 8

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## Question 11

Look at the addition patterns below.

$$1 + 3 = 4$$

$$1 + 3 + 5 = 9$$

$$1 + 3 + 5 + 7 = 16$$



$$1 + 3 + 5 + 7 + 9 = 25$$

How many consecutive odd integers starting with 1 must be added to produce 64?

- A. 8
- B. 6
- C. 7
- D. 9

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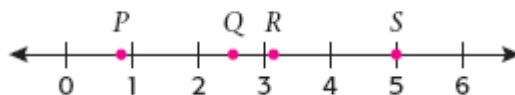
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## Question 12

Which point on the number line below represents the value  $\sqrt{10}$  ?




- A. Point Q
- B. Point S
- C. Point P
- D. Point R

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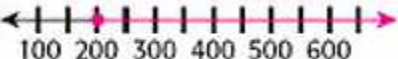
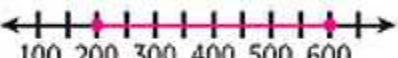
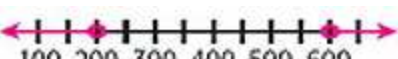
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## Question 13

A single round-trip plane ticket from Illinois to Florida costs between \$200 and \$600, depending on the time of year and the flight chosen.



Which number line best represents this cost?

- A. 
- B. 
- C. 
- D. 

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**14 of 35****Question 14**

Paula multiplied a number by 16. Her result is a positive number less than 16. Which of these did Paula multiply by 16?

- A. A number greater than one
- B. A number less than zero
- C. A number between zero and one
- D. Zero

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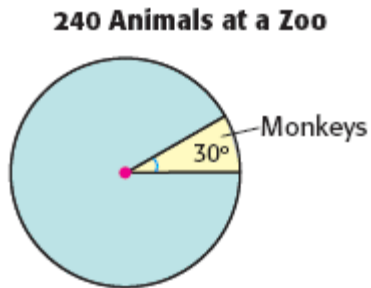
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## Question 15

The circle graph below represents a total of 240 animals at a zoo. The shaded sector represents the number of monkeys at this zoo.



How many monkeys are at this zoo?

- A. 8
- B. 20
- C. 72
- D. 30

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## Question 16



The graph of a line contains the points (5, 3) and (5, -1).

Which of the following *must* be true about the graph of this line?

- A. The slope of the line is positive.
- B. The slope of the line is negative.
- C. The line intersects the  $x$ -axis.
- D. The line intersects the  $y$ -axis.

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Mike has only 2 red apples and 3 green apples in a bowl. Without looking he chooses an apple and gives it to his sister. Then he chooses an apple for himself.

What is the probability that he and his sister will each get a red apple?

- A. 30%
- B. 40%
- C. 10%
- D. 60%

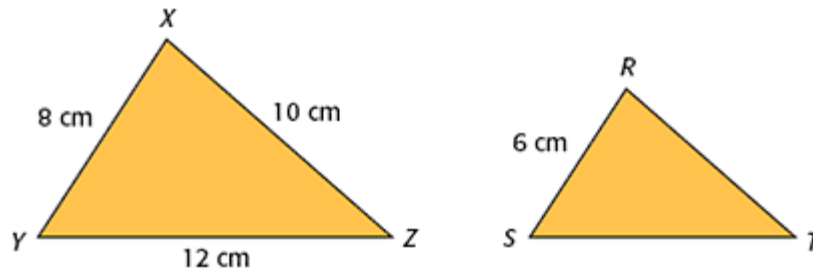
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## Question 18



 $\triangle XYZ$  is similar to  $\triangle RST$ .What is the length of  $\overline{ST}$ ?

- A. 7.5 cm
- B. 8.5 cm
- C. 10 cm
- D. 9 cm

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## Question 19



Juan had a checking account with a balance of  $x$  dollars. After he withdrew  $y$  dollars, he had a balance of \$100.

Which of the following shows the correct relationship between  $x$ ,  $y$ , and \$100?

- A.  $x - y > \$100$
- B.  $x - y = \$100$
- C.  $x + y = \$100$
- D.  $\$100 < x - y$

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## Question 19



Juan had a checking account with a balance of  $x$  dollars. After he withdrew  $y$  dollars, he had a balance of \$100.

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- C.  $x + y = \$100$
- D.  $\$100 < x - y$

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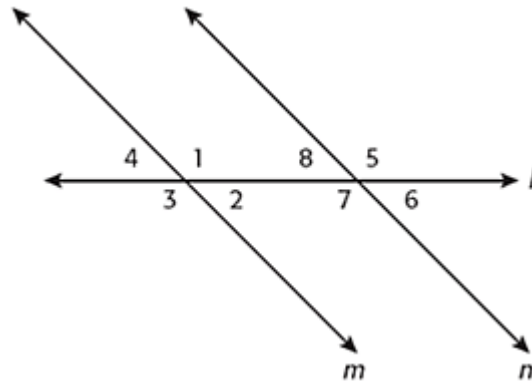
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## Question 20

Line  $l$  intersects parallel lines  $m$  and  $n$  as shown.



Which list contains all the angles that are congruent to  $\angle 1$  ?

- A.  $\angle 3, \angle 5, \angle 7$
- B.  $\angle 3, \angle 6, \angle 8$
- C.  $\angle 2, \angle 7, \angle 8$
- D.  $\angle 2, \angle 3, \angle 4$

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 **21 of 35** **Question 21**



The inequality  $70^\circ < x < 80^\circ$  represents the range of the ideal water temperature, in degrees Fahrenheit, for Sammy's fish.

Which statement is true about the situation?

- A. The ideal water temperature is less than  $70^\circ\text{F}$ .
- B. The ideal water temperature is less than  $70^\circ\text{F}$  or greater than  $80^\circ\text{F}$ .
- C. The ideal water temperature is greater than  $80^\circ\text{F}$ .
- D. The ideal water temperature is between  $70^\circ\text{F}$  and  $80^\circ\text{F}$ .

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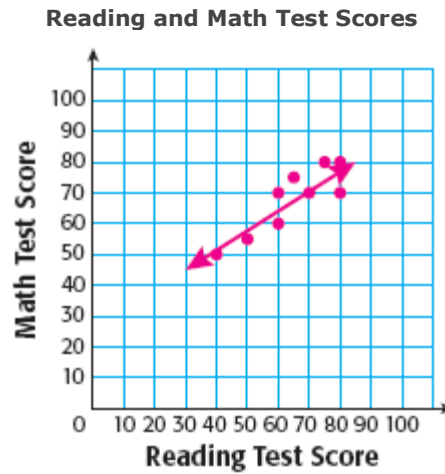
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## Question 22

The scatter plot shows the math and reading test scores of nine students.



Based on the line of best fit, which is the best prediction for a reading test score when a student's math test score is 90?

- A. 90
- B. 85
- C. 95
- D. 100

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## Question 23



Which of the following equations represents the relationship between  $x$  and  $y$  in the table?

$x$	$y$
0	2
1	5
2	8
3	11
4	14

- A.  $y = 2x$
- B.  $y = x + 2$
- C.  $y = 5x$
- D.  $y = 3x + 2$

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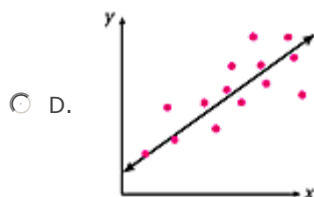
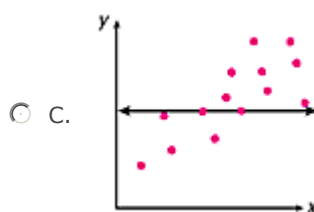
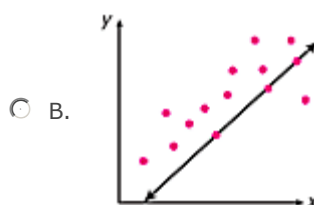
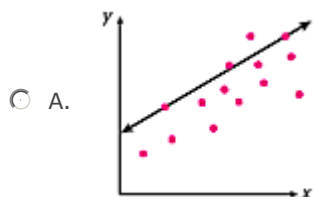
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### Question 24

Which scatter plot shows the line that best fits the data points given?



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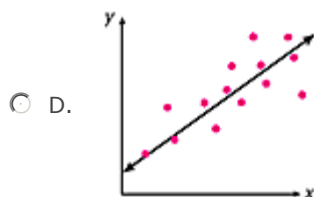
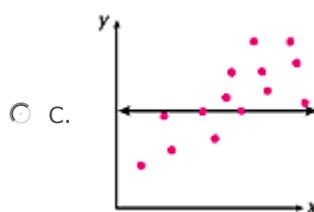
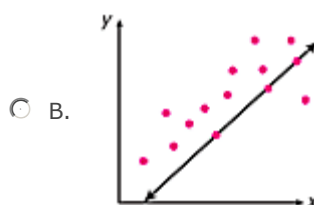
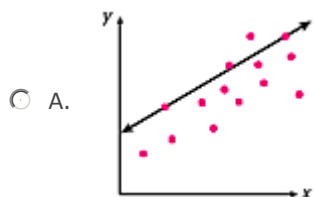
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### Question 24

Which scatter plot shows the line that best fits the data points given?



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## Question 25

The picture below shows both sides of a nickel when landing heads up or tails up.



Heads Up



Tails Up



If Billy tosses the nickel three times, what is the probability of the nickel landing tails up on all three tosses?

- A.  $\frac{1}{4}$
- B.  $\frac{1}{2}$
- C.  $\frac{1}{6}$
- D.  $\frac{1}{8}$

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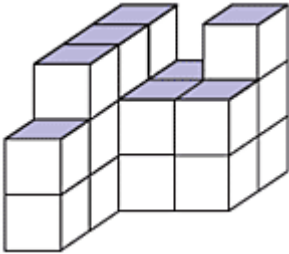
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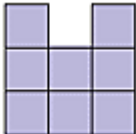
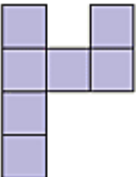
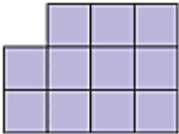

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## Question 26



Which drawing represents the top view of this solid?



- A. 
- B. 
- C. 
- D. 

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When filled to capacity, a container holds 4.6 liters of liquid. How many milliliters (mL) is this?

- A. 4600 mL
- B. 0.46 mL
- C. 460 mL
- D. 46 mL

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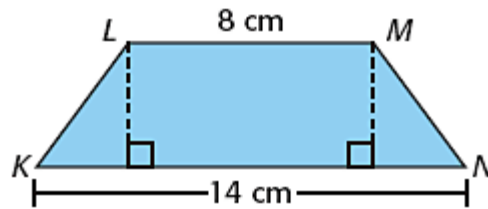
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## Question 28

Quadrilateral  $KLMN$  is an isosceles trapezoid with a perimeter of 32 cm.





What is the area of quadrilateral  $KLMN$ ?

- A.  $88 \text{ cm}^2$
- B.  $44 \text{ cm}^2$
- C.  $112 \text{ cm}^2$
- D.  $55 \text{ cm}^2$

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## Question 29

Which is equivalent to the expression below?

$$\frac{x}{2} - 1$$

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

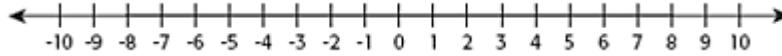
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## Question 30



The following pairs of numbers can be graphed on this number line.


Which numbers have the same absolute value?

- A. -3 and 3
- B. 4 and -8
- C. 5 and 10
- D. -2 and -4

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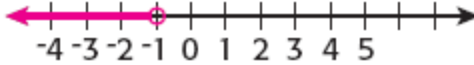
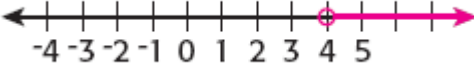

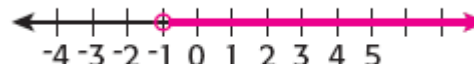
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## Question 31

Which graph best represents the solution to the inequality below?



$$-4x + 10 < -6$$

- A. 
- B. 
- C. 
- D. 

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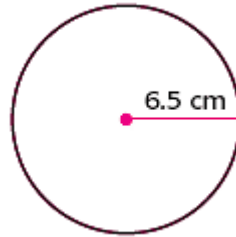
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## Question 32





What is the circumference of this circle in terms of  $\pi$ ?

- A.  $65\pi$  cm
- B.  $13\pi$  cm
- C.  $42.25\pi$  cm
- D.  $6.5\pi$  cm

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 **33 of 35** **Question 33**

Malia has  $1\frac{1}{2}$  times more tennis balls than Jolie. Together they have 20 tennis balls. How many tennis balls does Malia have?

- A. 8
- B. 10
- C. 12
- D. 15

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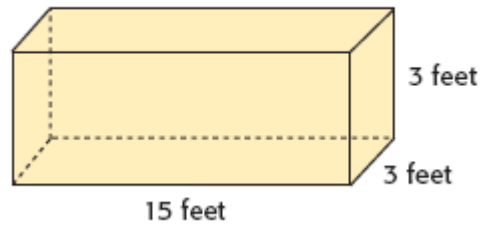
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## Question 34

What is the surface area of this rectangular prism?





- A. 135 square feet
- B. 155 square feet
- C. 180 square feet
- D. 198 square feet

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## Question 35

Which expression satisfies the pattern below?

$n$	?
0	0
1	1
2	4
3	9
4	16

- A.  $n^2$
- B.  $n^3$
- C.  $3n^2$
- D.  $4n^2 - 3$

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