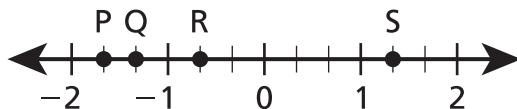


2

Points P, Q, R, and S are plotted on the number line shown below.



What point represents the location of the value $-1\frac{1}{3}$?

- A point P
- B point Q
- C point R
- D point S

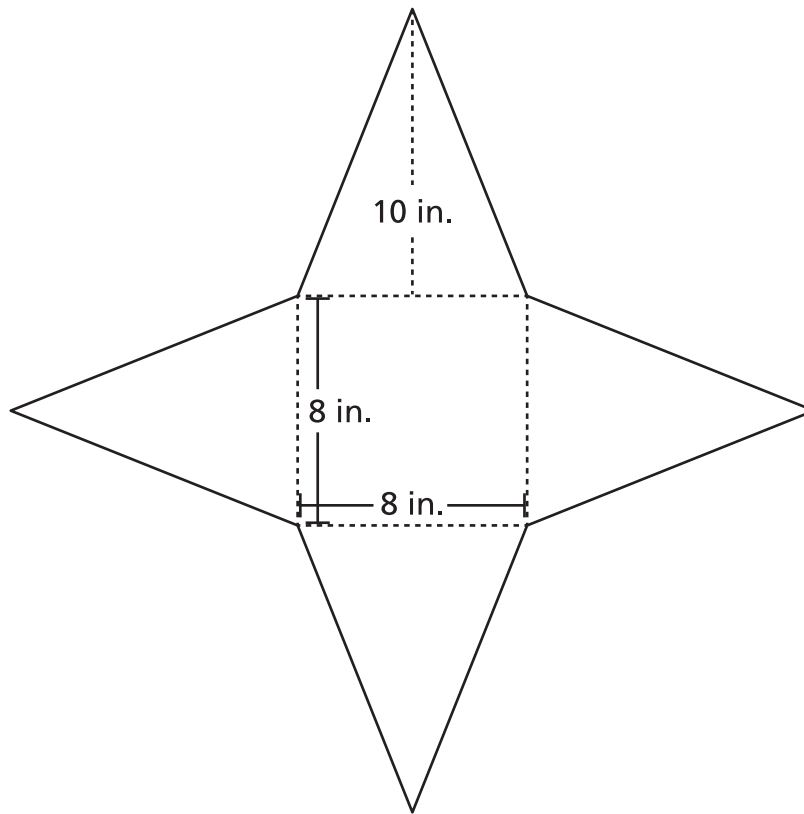
3

A bakery owner bakes 450 cookies each day. Which equation can be used to determine the number of cookies, c , the owner bakes for any number of days, d ?

- A $c = d + 450$
- B $d = c + 450$
- C $450d = c$
- D $450c = d$

GO ON

The net of a right square pyramid is shown below.



What is the surface area, in square inches, of the square pyramid?

- A 64
- B 80
- C 224
- D 384

12

Which expression is equivalent to 14 less than the product of 8 and y ?

A $14 - 8y$

B $14 - \frac{y}{8}$

C $8y - 14$

D $\frac{y}{8} - 14$

GO ON

13

What is the least common multiple of 9 and 12 ?

A 3

B 36

C 72

D 108

14

What is the value of the expression $\frac{3(7 - 2) + 5^3}{2}$?

A 15

B 17

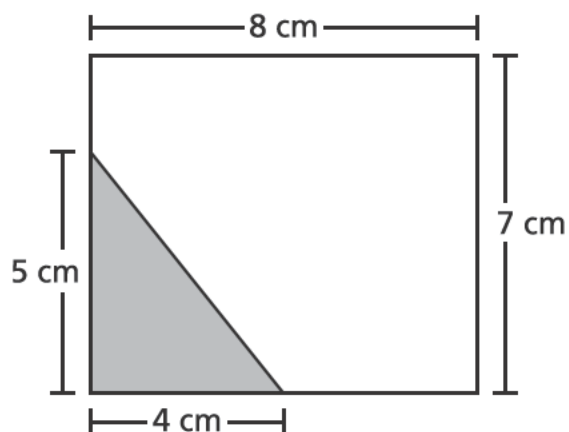
C 70

D 72

GO ON

15

The figure below shows a shaded triangle within a rectangle.



What is the area, in square centimeters, of the part of the rectangle that is **not** shaded?

- A 36
- B 46
- C 56
- D 66

GO ON

17

Lukas recorded the elevations, in feet, of four activities while on vacation. The table below shows the elevation of each activity, relative to sea level.

ACTIVITY ELEVATION

Activity	Elevation
Biking	83 ft
Diving	– 122 ft
Hiking	456 ft
Swimming	– 17 ft

Which activity has an elevation closest to sea level?

- A biking
- B diving
- C hiking
- D swimming

18

An expression is shown below.

$$5z + (9 \div 3)$$

What is the coefficient of the variable in this expression?

- A 5
- B z
- C 9
- D 3

GO ON

21

A quadrilateral is drawn on a coordinate plane with the points $A(-4,8)$, $B(6,8)$, $C(6,4)$, and $D(-4,4)$. What is the length, in units, of side AB ?

- A 2
- B 6
- C 10
- D 16

GO ON

22 What is the value of the expression $5b + c^3$ when $b = 7$ and $c = 4$?

A 24

B 47

C 76

D 99

24 Which expression is equivalent to $8(2a + 3b) - 2b$?

A $16a + b$

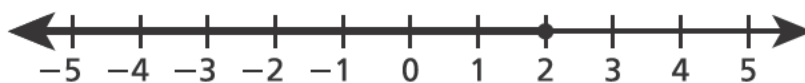
B $16a + 8b$

C $16a + 22b$

D $16a + 24b$

GO ON

Which inequality, in terms of x , is graphed on the number line shown below?



- A $x > 2$
- B $x < 2$
- C $x \geq 2$
- D $x \leq 2$

31

The number 60 is 75% of what number?

- A 45
- B 80
- C 120
- D 125

32

The table below shows the ratio of the number of teachers to the number of students at a school. The ratio of teachers to students is constant. Three numbers are missing from the table.

TEACHERS AND STUDENTS

Number of Teachers	2	?	8	12	?
Number of Students	5	15	?	30	75

Which table shows the correct missing numbers in the table above?

TEACHERS AND STUDENTS

A

Number of Teachers	2	6	8	12	37
Number of Students	5	15	16	30	75

TEACHERS AND STUDENTS

C

Number of Teachers	2	12	8	12	72
Number of Students	5	15	11	30	75

TEACHERS AND STUDENTS

B

Number of Teachers	2	6	8	12	30
Number of Students	5	15	20	30	75

TEACHERS AND STUDENTS

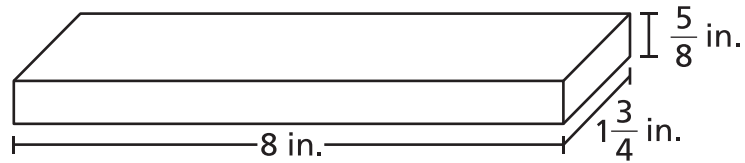
D

Number of Teachers	2	6	8	12	32
Number of Students	5	15	20	30	75

GO ON

33

A diagram of a right rectangular prism is shown below.



What is the volume, in cubic inches, of the right rectangular prism?

- A $6\frac{3}{4}$
- B $8\frac{3}{4}$
- C $10\frac{3}{8}$
- D $14\frac{5}{8}$

34

The ratio of number of yards to number of miles is 3,520 : 2. How many yards are in 5 miles?

- A 1,760
- B 5,280
- C 7,040
- D 8,800

GO ON

35 Which expression is equivalent to $4(3m + 1)$?

- A $7m + 1$
- B $7m + 5$
- C $12m + 1$
- D $12m + 4$

36 Mark ran 8 miles in 60 minutes. If Mark continues to run at that same rate, how many minutes will it take him to run 12 miles?

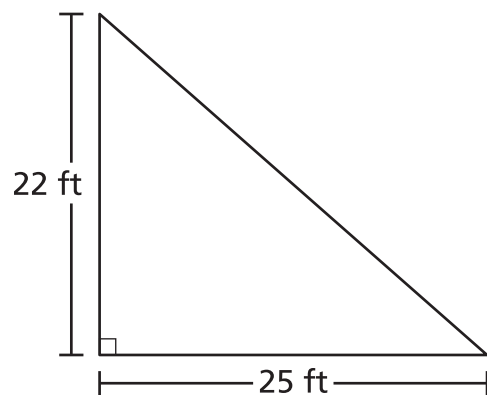
- A 48
- B 72
- C 90
- D 96

GO ON

37

This question is worth 1 credit.

A right triangle is shown below.



What is the area, in square feet, of the right triangle?

Answer _____ square feet

GO ON

38

This question is worth 1 credit.

The lowest recorded temperatures for each of two states are listed below.

-27°F and -35°F

Write a statement using $<$, $>$, \leq , or \geq to compare the recorded temperatures of the two states.

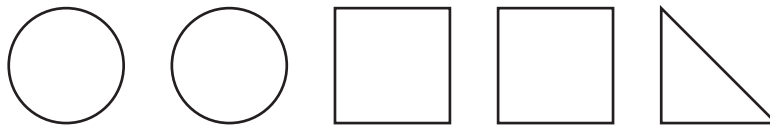
Answer _____

GO ON

39

This question is worth 1 credit.

A set of shapes is shown below.



What is the ratio of the number of circles to the total number of shapes?

Answer _____

GO ON

This question is worth 2 credits.

Lee makes a rectangular-shaped tile pattern by placing three tiles side by side, with no space between the tiles. The list below describes the shape of each tile and the order in which they are placed.

- The first tile is in the shape of a square with side lengths of x inches.
- The middle tile is shaped like a rectangle with a width of x inches and a length of $3x$ inches.
- The third tile is shaped like a square with side lengths of x inches.

The perimeter of the tile pattern is 60 inches. What is the value of x in the tile pattern?

Show your work.

Answer _____ inches

GO ON

This question is worth 2 credits.

The list below shows the cost of the same candle at two different stores.

- Store ABC sells 6 of these candles for \$12.00.
- Store XYZ sells 8 of these candles for \$14.00.

Which store sells the candle for a lower unit rate?

Explain how you determined your answer.

42

This question is worth 2 credits.

A box contains $8\frac{1}{4}$ cups of cereal. One serving of cereal is $\frac{3}{4}$ cup. How many servings of cereal are in the box?

Show your work.

Answer _____ servings

GO ON

43

This question is worth 2 credits.

What is the value of the expression $7 \times (5 - 3)^3 - 20 \div 4$?

Show your work.

Answer _____

GO ON

This question is worth 2 credits.

The tables below show the ratios of distance to time traveled by Car A and Car B.

CAR A

Time (hours)	Distance (miles)
2	130
4	260
6	390

CAR B

Time (hours)	Distance (miles)
3	186
5	310
7	434

If both cars maintain their rates of speed, what is the difference between the distances, in miles, traveled by Car A and by Car B after 8 hours?

Show your work.

Answer _____ miles

GO ON

45

This question is worth 2 credits.

A shipping container in the shape of a right rectangular prism has a base with an area of 42 square feet. The height of the container is $5\frac{3}{4}$ feet. What is the volume, in cubic feet, of the shipping container?

Show your work.

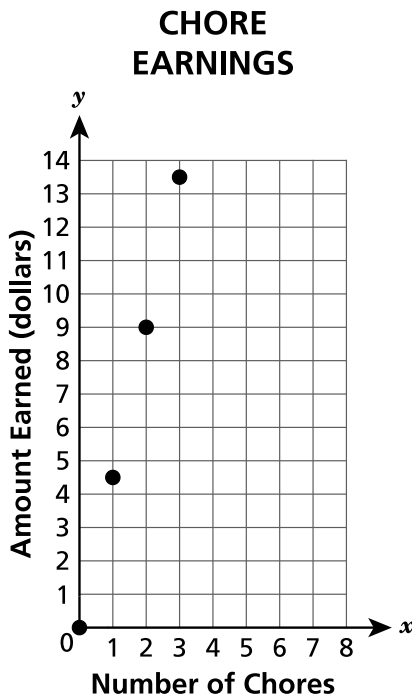
Answer _____ cubic feet

GO ON

46

This question is worth 3 credits.

Logan earns money for completing chores. The graph shown below represents the relationship between the number of chores, x , he completes, and the amount of money, y , he earns.



Based on the graph, explain the relationship between the number of chores Logan completes and the amount of money he earns. Be sure to identify the dependent and the independent variables in your answer.

Explain your answer.

Determine the total amount of money Logan will earn after completing 9 chores.

Answer \$ _____

STOP