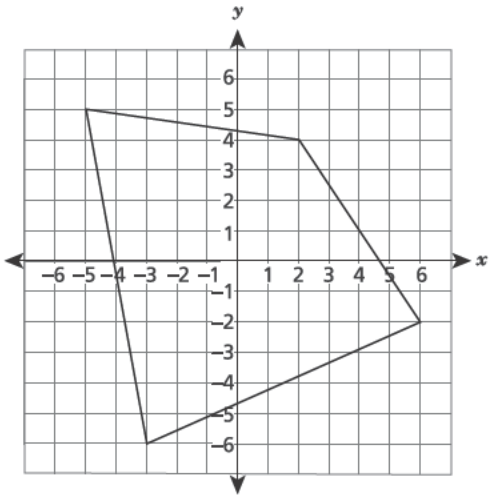
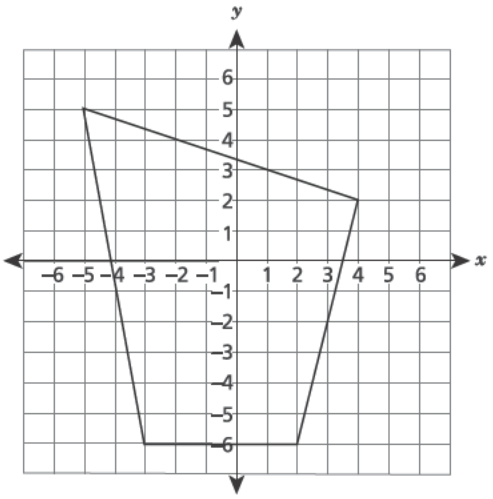
1 Which coordinate plane shows a polygon with four vertices graphed at $(-5, 5)$, $(2, 4)$, $(6, -2)$, and $(-3, -6)$?

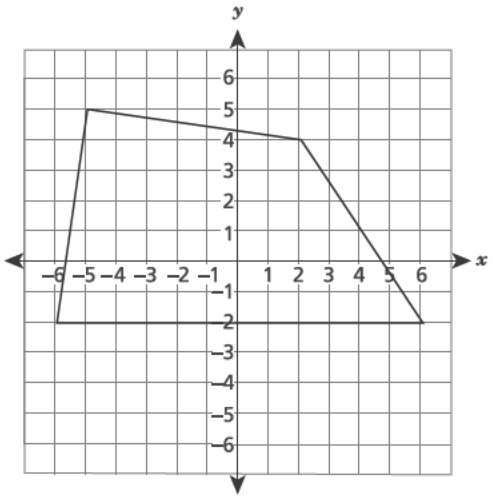
A



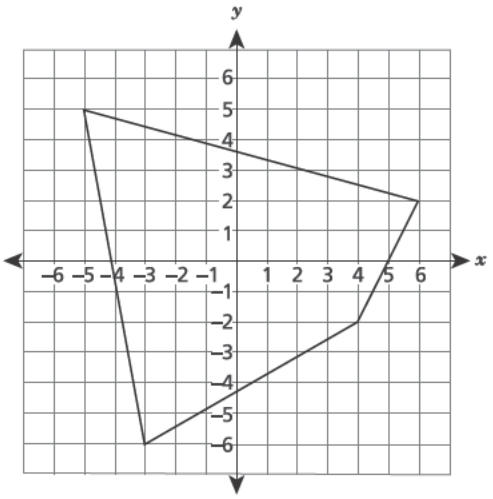
C



B



D



2 What is the value of the expression $\frac{3^2 \cdot (2^3 + 4)}{2^2}$?

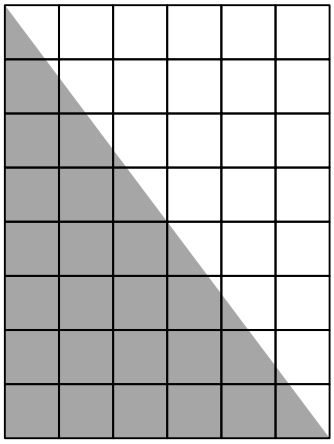
A 10

B 15

C 19

D 27

3 The grid shown below is in the shape of a rectangle.



What is the area, in square units, of the shaded part of the rectangle?

A 14

B 24

C 28

D 48

4 Debnil has 6 teaspoons of salt. The ratio of teaspoons to tablespoons is $3 : 1$. How many tablespoons of salt does Debnil have?

A $\frac{1}{18}$

B $\frac{1}{2}$

C 2

D 18

GO ON

7 Which expression is equivalent to the phrase shown below?

the quotient of the sum of $2t$ and 2, and twice the cube of s

A $2t + \frac{2}{3s^2}$

B $2t + \frac{2}{2s^3}$

C $\frac{2t + 2}{3s^2}$

D $\frac{2t + 2}{2s^3}$

10 A custodian plans to repaint some classroom bookcases. She has $5\frac{1}{4}$ gallons of paint. All of the bookcases are the same size and each requires $\frac{3}{4}$ gallon of paint. How many bookcases will the custodian be able to repaint with that amount of paint?

A 3

B 4

C 7

D 15

GO ON

13 Carly purchased $9\frac{1}{2}$ pints of ice cream for a party. If each guest will be served exactly $\frac{3}{5}$ pint of ice cream, what is the greatest number of guests that Carly can serve?

A 5

B 9

C 15

D 16

16 At a bus station, buses begin their routes at 6:00 a.m. The schedule for two of the buses is based on the time intervals listed below.

- Bus A has a long route and leaves the station every 75 minutes.
- Bus B has a short route and leaves the station every 15 minutes.

What is the next time Bus A and Bus B will leave the bus station at the same time?

A 7:00 a.m.

B 7:15 a.m.

C 7:30 a.m.

D 8:30 a.m.

17 Which number has an absolute value greater than 5?

A -6

B -5

C 0

D 5

26 A bakery made 9 cakes using 3 bags of flour. The bakery uses the same relationship between cakes made and the amount of flour used to make all of their cakes. Which table of values shows the relationship between the number of cakes the bakery makes to the number of bags of flour the bakery uses?

A

CAKES BAKED

Cakes	1	2	3	4	5
Bags of Flour	3	6	9	12	15

B

CAKES BAKED

Cakes	3	6	9	12	15
Bags of Flour	1	2	3	4	5

C

CAKES BAKED

Cakes	7	8	9	10	11
Bags of Flour	1	2	3	4	5

D

CAKES BAKED

Cakes	1	2	3	4	5
Bags of Flour	7	8	9	10	11

27 The volume, V, of any cube with a side length, s, can be determined using the formula $V = s^3$. What is the volume, in cubic centimeters, of a cube with a side length of 2.3 centimeters?

A 5.29

B 6.9

C 8.027

D 12.167

GO ON

28 Mr. Tola has a piece of wood that is $8\frac{1}{4}$ feet in length. He wants to cut it into pieces that are each $\frac{3}{4}$ foot in length. How many $\frac{3}{4}$-foot pieces of wood can Mr. Tola make?

A 7

B 8

C 9

D 11

29 A zoo has 15 toucans and 60 parrots. What is the ratio of the number of toucans to the number of parrots at the zoo?

A 1 : 4

B 1 : 5

C 4 : 1

D 4 : 5

30 A restaurant used 231 eggs last week. Of these, 46 were brown in color. The remaining eggs were white in color. Which equation can be used to solve for w, the number of white eggs used last week?

A $231 + 46w = 0$

B $46 + w = 231$

C $w = 231 + 46$

D $231 = 46w$

31 Which expression is equivalent to $9(9m + 3t)$?

A $18m + 3t$

B $81m + 3t$

C $18m + 12t$

D $81m + 27t$

STOP

32 Which set of values makes the inequality $n \geq -5$ true?

A $\{-5, -5.5, -6\}$

B $\{-5, -4.5, -3\}$

C $\{-6, 0, 5\}$

D $\{-6, -7, -8\}$

33 An ice cream shop sold 48 vanilla milkshakes in a day, which was 40% of the total number of milkshakes sold that day. What was the total number of milkshakes that the ice cream shop sold that day?

A 60

B 72

C 100

D 120

34 Which expression represents the phrase below?

3 fewer than a number, p

A $3 - p$

B $p \div 3$

C $3 \div p$

D $p - 3$

GO ON

35 What number is **not** part of the solution set to the inequality below?

$$w - 10 \leq 16$$

A 11

B 15

C 26

D 27

36 The coordinates of the vertices of triangle ABC are $A(1, -1)$, $B(1, 4)$, and $C(8, 4)$. What is the length, in units, of the line segment that connects vertex A and vertex B?

A 1

B 4

C 5

D 7

37 Ken and Tami are making necklaces. Ken makes 25 necklaces. Tami makes m more necklaces than Ken. Which expression represents the total number of necklaces Ken and Tami made?

A $25 + (25 + m)$

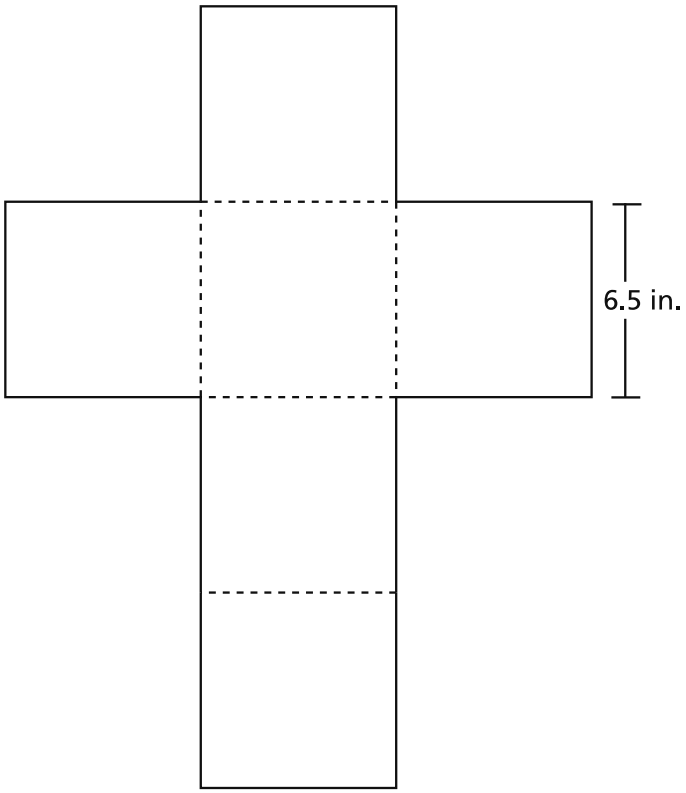
B $25 + 25m$

C $25 + m$

D $25m$

38 Kira decorates the exterior faces of a gift box in the shape of a cube. The figure below shows the net of the gift box.

NET OF KIRA'S GIFT BOX



What is the surface area, in square inches, of the gift box that Kira decorates?

A 91.0

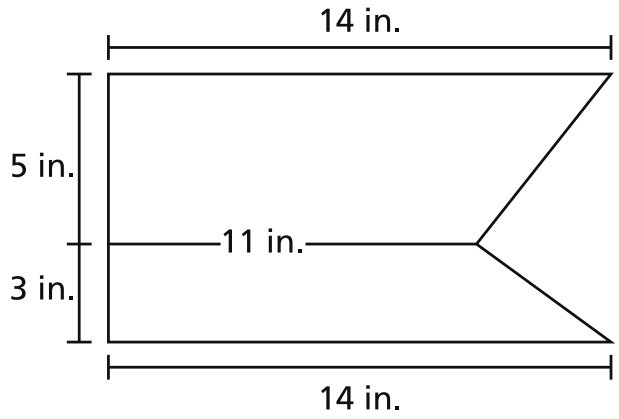
B 169.0

C 253.5

D 274.6

GO ON

39 David made a class banner out of a large rectangular piece of paper. He cut a triangular piece out of one side, as pictured below.



What is the area, in square inches, of the banner?

Show your work.

Answer _____ square inches

40 Abdi has two electric train sets: A and B. Each train is on its own circular track. He starts both trains at the same time. Train A returns to its starting point every 12 seconds. Train B returns to its starting point every 9 seconds. If the trains continue traveling, what is the **least** amount of time, in seconds, that both trains will arrive at the starting points at the same time?

Show your work.

Answer _____ seconds

GO ON

41 Winston earns $140.00 by selling 56 hot dogs at a concession stand at school. Using the same rate for the cost of one hot dog, how many more hot dogs would Winston need to sell to earn a total of $175.00 ?

Show your work.

Answer _____ hot dogs

42 At the end of a baseball game, the players were given the choice of having a bottle of water or a box of juice. Of all of the players, 12 chose a bottle of water, which was $\frac{3}{4}$ of the total number of players. Write and solve an equation to determine *p*, the total number of players at the baseball game.

Show your work.

Answer _____ players

GO ON

43 Tristan is comparing two number patterns based on the information below.

- Both patterns start with the number 1.
- Pattern A follows the rule "add 3".
- Pattern B follows the rule "add 4".

How do each of the first 5 terms in Pattern A compare to the first 5 terms in Pattern B ? As part of your answer, list the first 5 terms of each pattern.

Explain your answer.

44 Mr. Jackson orders lunches to be delivered to his workplace for himself and some coworkers. The cost of each lunch is $6.25. There is also a one-time delivery fee of $3.50 to deliver the lunches. What expression could Mr. Jackson use to find the cost of ordering *n* lunches?

Expression _____

Use your expression to find the total cost of delivering 5 lunches.

Show your work.

Answer $ _____

GO ON

45 A recipe uses $1\frac{1}{4}$ cups of milk to make 10 servings. If the same amount of milk is used for each serving, how many servings can be made using 1 gallon of milk?

Show your work.

Answer _____ servings

46 A store sells two different packages of glue sticks as described below.

- Package A: 18 glue sticks
- Package B: 12 glue sticks

Write an equation for Package A and an equation for Package B that represent the total number of glue sticks, g, in p packages.

Package A _____

Package B _____

Mr. Davis buys 5 packages of the Package A glue sticks. Ms. Wilson buys 8 packages of the Package B glue sticks. Use your equations to find the difference in the total number of glue sticks that each person purchased.

Show your work.

Answer _____ glue sticks

STOP