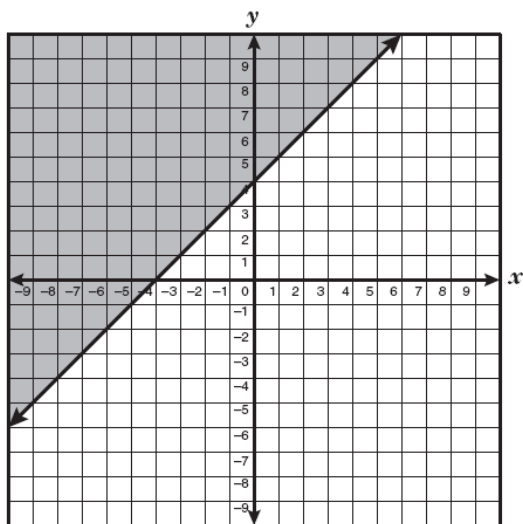


Algebra 1 Pretest

1. The students in Mr. Lee's science class are ordering the materials they will need for a science experiment. Each student will need a bag of plant seeds that costs \$1.00 and a 6-plant tray that costs \$2.50. If x represents the number of students in Mr. Lee's science class, which equation can be used to find y , the amount in dollars spent by Mr. Lee's students?

- A $y = 3.5x$
- B $y = 2.5x + 1$
- C $y = x + 3.5$
- D $y = x + 2.5$

2. Mrs. Weathersbee drew a line and shaded part of the coordinate plane.



Which list is made up of coordinate pairs representing points in the shaded part of the coordinate plane?

- A $(-3, 4)$, $(3, 8)$, and $(-9, -2)$
- B $(3, -4)$, $(-2, 5)$, and $(6, -3)$
- C $(-6, 3)$, $(1, 6)$, and $(-2, 1)$
- D $(-3, 5)$, $(3, 1)$, and $(-9, 2)$

3. A set of parentheses is missing from the expression below.

$$15 - 5 + 7 \cdot 2 + 4$$

Which of the following expressions has the parentheses in the correct place for the expression to equal 52?

- A $15 - (5 + 7 \cdot 2) + 4$
- B $(15 - 5 + 7) \cdot 2 + 4$
- C $15 - (5 + 7 \cdot 2 + 4)$
- D $15 - 5 + 7 \cdot (2 + 4)$

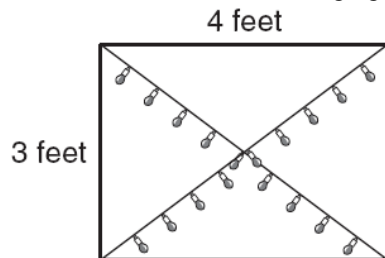
4. A recipe for 12 waffles calls for $1\frac{1}{2}$ cups of milk, $2\frac{1}{4}$ cups of flour, and $1\frac{1}{3}$ cups of other ingredients. How many cups of milk, flour, and other ingredients are needed to make 36 waffles?

- A $20\frac{1}{3}$ cups
- B $15\frac{1}{4}$ cups
- C $12\frac{1}{4}$ cups
- D $5\frac{1}{12}$ cups

5. Mai earns a salary of \$200 per week plus an additional 5% commission on her sales. If Mai's weekly salary increases by \$25 and her commission increases to 6%, how much will she earn if her weekly sales are \$2,500?

- A \$325.00
- B \$375.00
- C \$525.00
- D \$700.00

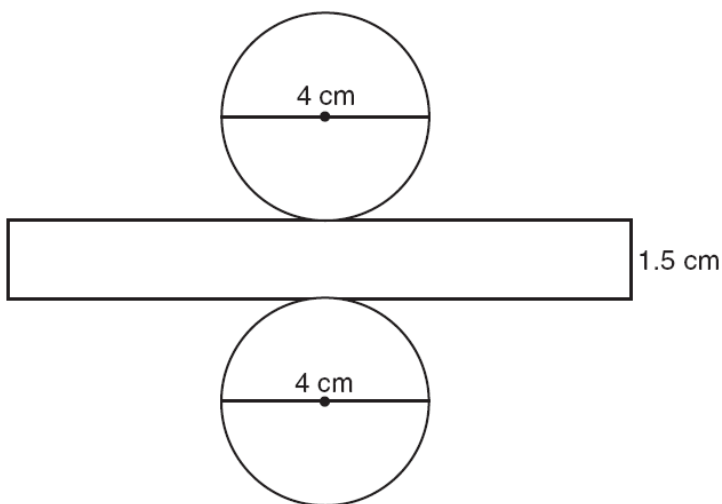
6. Mrs. Gonzáles wants to string lights along both diagonals of a rectangular window, as shown below



What is the minimum length of lights Mrs. Gonzáles will need?

- A 5 ft
- B 7 ft
- C 10 ft
- D 14 ft

7. Moffett's Candy Factory makes candy in the shape of cylinders. The net of a cylindrical piece of candy is shown below.



Which is closest to the total surface area of this piece of candy?

- A 31 cm^2
- B 19 cm^2
- C 75 cm^2
- D 44 cm^2

8. The table shows the relationship between the weight of a package and the cost of mailing it

Mailing a Package

Weight (ounces)	Cost
1 or less	\$0.37
2	\$0.60
3	\$0.83
4	\$1.06
8	\$1.98

Based on the pattern in the table, what will it cost to mail a 13-ounce package?

- A \$3.04
- B \$2.99
- C \$3.13
- D \$4.81

9. Sharon played an electronic game. There were 15 questions, of which she answered 3 incorrectly. At this rate, how many questions should Sharon expect to answer incorrectly if she answers a total of 135 questions?

- A 45
- B 27
- C 9
- D 5

10. Mrs. Díaz told her math class that a particular rectangle has a perimeter of 36 units and an area of 65 square units. Which of the following could be the dimensions of the rectangle?

- A 2.5 units by 26 units
- B 4 units by 9 units
- C 5 units by 13 units
- D 6.5 units by 11.5 units

11. Which equation describes the data in the table?

x	y
-3	5
-2	4
1	1
4	-2

- A $x + y = 2$
- B $2x + y = -1$
- C $x - y = -2$
- D $x - y = -6$
- E $2x - y = 1$

12. The equations of 2 lines are shown below.

$$2x - 4y = 6$$

$$3x + y = -5$$

What are the coordinates of the point of intersection?

- A (-1, -8)
- B (-3, -3)
- C (-1, -1)
- D (1, -1)
- E (-1, -2)

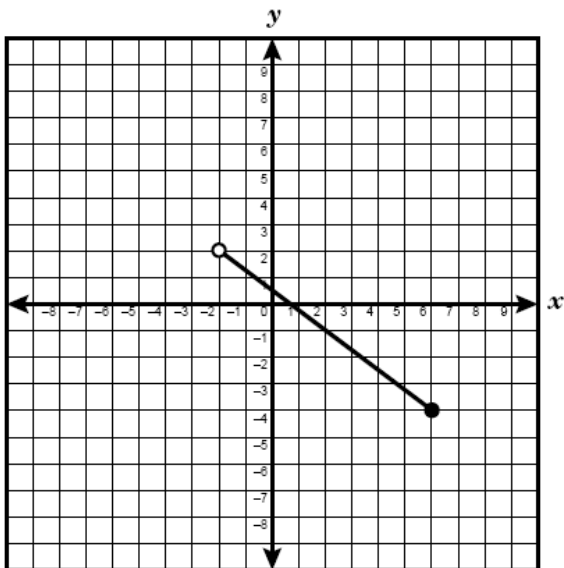
13. At which points does the graph of $y = x^2 + 3x - 18$ intersect the x -axis?

- A (-9, 0) and (2, 0)
- B (-6, 0) and (-3, 0)
- C (-6, 0) and (3, 0)
- D (-3, 0) and (6, 0)
- E (-2, 0) and (9, 0)

14. If $x = n^3$, which expression is equal to n^{12} ?

- A x^3
- B x^4
- C x^7
- D x^9
- E x^{15}

15. What is the domain of the function shown on the graph?



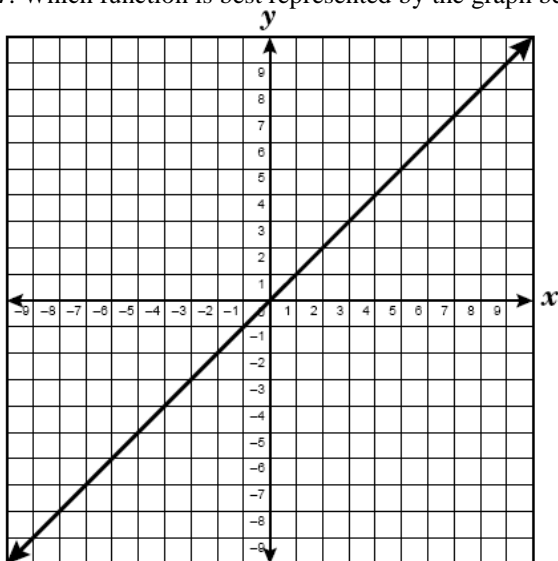
- A. $-2 < y \leq 2$
- B. $-4 \leq y \leq 6$
- C. $-4 < y \leq 2$
- D. $-2 < x \leq 6$
- E. $-2 \leq x \leq 2$

16. What is the value of x in the following equation?

$$3x - 4(x + 1) + 10 = 0$$

- A 2
- B 6
- C 10
- D 11
- E 14

17. Which function is best represented by the graph below?



- A $y = x$
- G $y = -x$
- C $y = x^2$
- D $y = \frac{1}{2}x - 1$
- E $y = \frac{1}{2}x + 1$

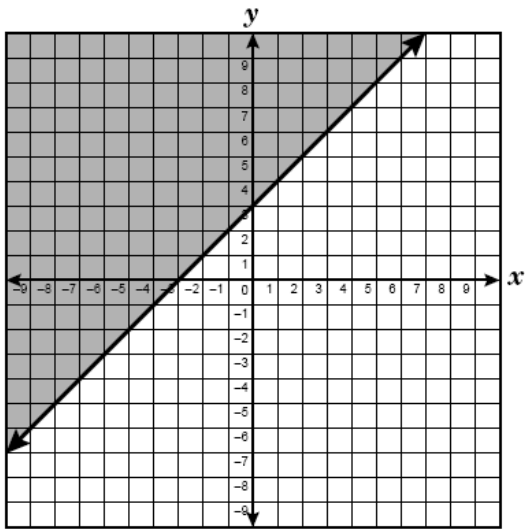
18. The circumference of a circular rug is about 31.4 feet, and its area is about 78.5 square feet. What is the approximate radius of the rug?

- A 3.5 ft
- B 5 ft
- C 7 ft
- D 9 ft
- E 10 ft

19. Which equation represents the line that passes through the points (6, 1) and (-2, -3)?

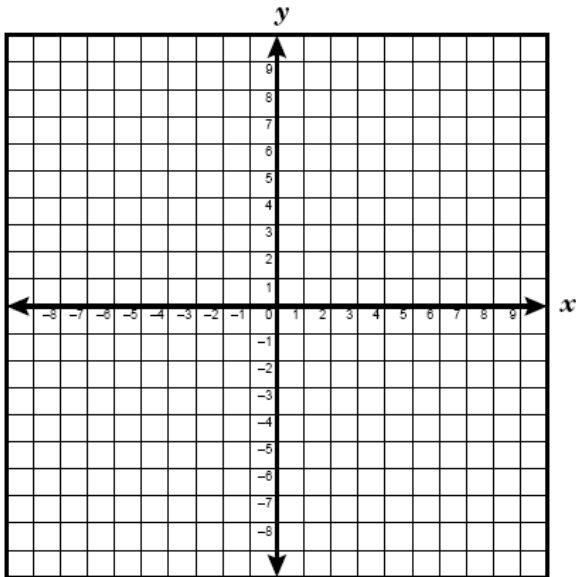
- A $y = -\frac{1}{2}x + 4$
- B $y = \frac{1}{2}x + 2$
- C $y = \frac{1}{2}x - 2$
- D $y = 2x - 1$
- E $y = 2x - 11$

20. Which inequality best describes the graph below?



- A $x - y \leq 3$
- B $x + y \leq -3$
- C $x + y \geq -3$
- D $x - y > 3$

21. The graph of line p has x -intercept $(-3, 0)$ and y -intercept $(0, -6)$. The graph of line q has a slope of 1 and crosses the origin.



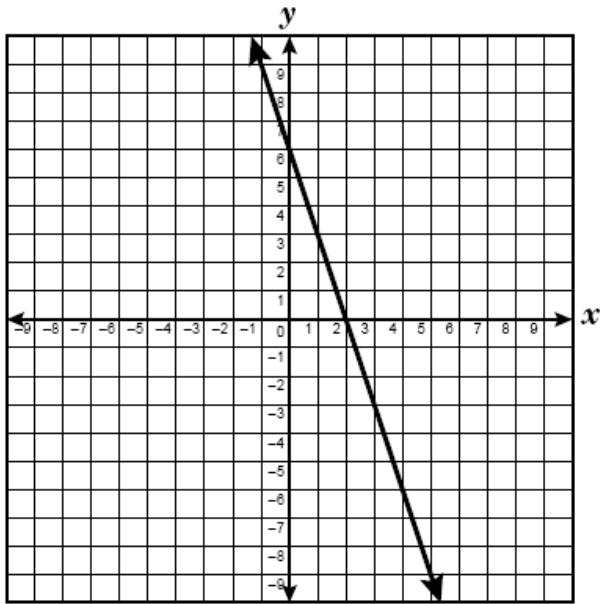
Which coordinate pair names the point at which lines p and q intersect?

- A $(0, -2)$
- B $(-2, 0)$
- C $(-2, -2)$
- D $(-3, 0)$
- E $(-6, 0)$

22. Yesterday a total of 24 students were present in Alfred's class. There were 3 fewer girls than twice the number of boys. Which system of equations can be used to find g , the number of girls who were present in Alfred's class yesterday, and b , the number of boys who were present?

- A
$$\begin{aligned} g + b &= 24 \\ g &= 2b - 3 \end{aligned}$$
- B
$$\begin{aligned} g + b &= 24 \\ b &= 2g - 3 \end{aligned}$$
- C
$$\begin{aligned} g + b &= 24 \\ g &= 2b + 3 \end{aligned}$$
- D
$$\begin{aligned} g + b &= 24 \\ b &= 2g + 3 \end{aligned}$$
- E
$$\begin{aligned} g &= b + 24 \\ b &= 2g - 3 \end{aligned}$$

23. The graph of the function $y = -3x + 6$ is shown below.



If the line is translated 3 units down, which function will describe the new line?

- A $y = -3x + 3$
- B $y = -x + 2$
- C $y = -3x - 1$
- D $y = -x + 6$
- E $y = -3x - 3$

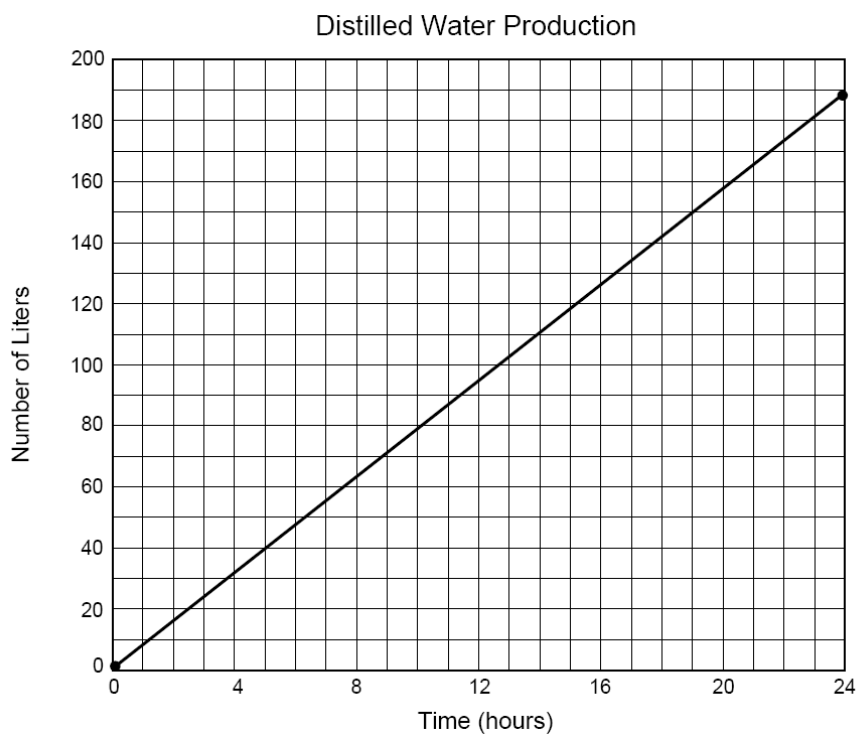
24. The area of a rectangle is given by the equation

$$2w^2 + w = 36$$

where w is the width. What is the width of the rectangle?

- A 9
- B 6
- C 4.5
- D 4
- E 3

25. A water distillation machine can produce 189 liters of water during each day of continuous operation. The graph shows the rate at which the machine produces water.



If the machine operates continuously for 3000 hours, what will be the total number of liters of distilled water produced?

- A 11,907 L
- B 23,625 L
- C 47,250 L
- D 70,875 L
- E 72,000 L

26. The owner of a convenience store recorded the number of customers in the store from 6:00 A.M. to 11:00 A.M. who were served coffee and the number of pots of coffee that were consumed.

Number of Pots of Coffee, p	Number of Customers, c
2	16
3	24
4	32
5	40
7	56

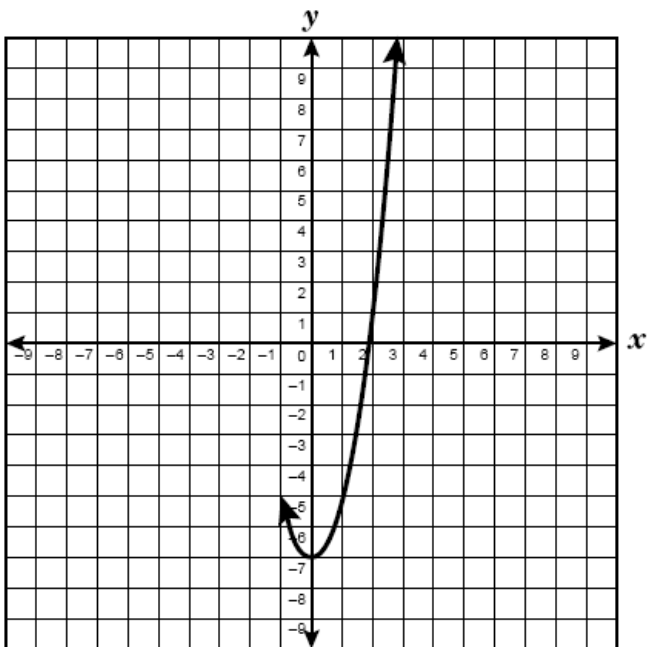
Which equation best describes the relationship between the number of customers who were served coffee and the number of pots of coffee?

- A $c = 5p + 5$
- B $c = 6p + 3$
- C $c = 8p$
- D $c = 6p$
- E $c = 12p - 9$

27. Mohammed earns \$650 per month plus an 8% commission on his sales. If he sold x dollars of merchandise last month, which equation can be used to find y , his total earnings last month?

- A $y = x + 0.08x$
- B $y = (650 + 0.08)x$
- C $y = 0.08(650 + x)$
- D $y = 0.08(650) + x$
- E $y = 650 + 0.08x$

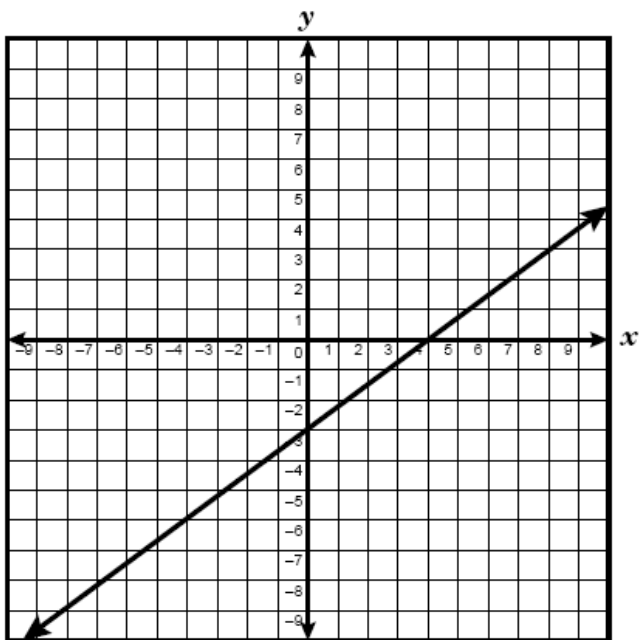
28. A portion of the graph of the function $y = 2x^2 - 7$ is shown on the grid below.



For which other value of x does y equal 1?

- A -1
- B -2
- C -3
- D -4
- E -5

29. What is the x -intercept of the function graphed below?



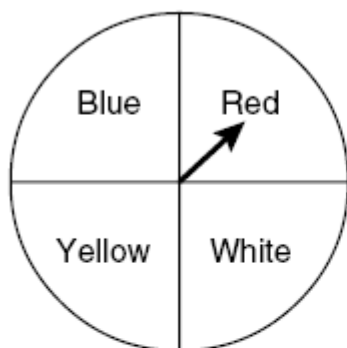
30. What is the y -intercept of the function $2x + 3y = -36$?

31. To find c , the total cost of an order of DVDs from a certain website, the equation $c = 19.99n + 4.99$ can be used, where n represents the number of DVDs ordered. If c is a function of n , which of the following best describes this relationship?

- A The value of n is constant in relation to c .
- B The value of n is dependent on c .
- C The value of c is constant in relation to n .
- D The value of c is dependent on n .

32.

allow.



Spinner Results

Red	7
White	5
Blue	4
Yellow	4

Which color on the spinner has the same experimental probability as theoretical probability?

- F Red
- G White
- H Blue
- J Yellow

33.

Which expression describes the area in square units of a rectangle that has a width of $4x^3y^2$ and a length of $3x^2y^3$?

A. $12x^6y^6$

B. $12x^5y^5$

C. $7x^6y^6$

D. $7x^5y^5$

34. Which expression is equivalent to $2x^2 + x - 3$

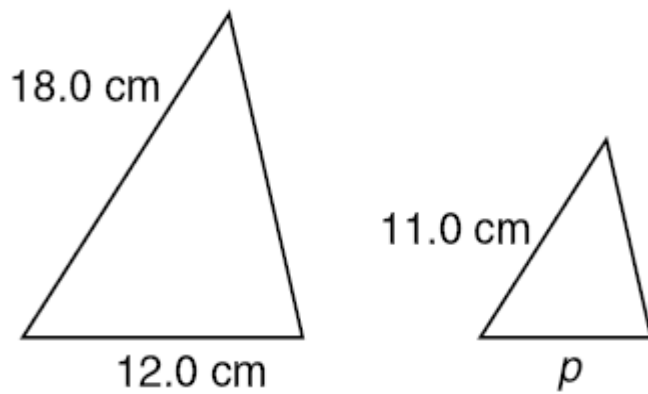
A) $(x + 3)(2x + 1)$

B) $(x - 10)(2x + 4)$

C) $(2x + 3)(x - 1)$

D) $(2x - 3)(x - 1)$

Kate has 2 similar triangular pieces of paper, as shown below.

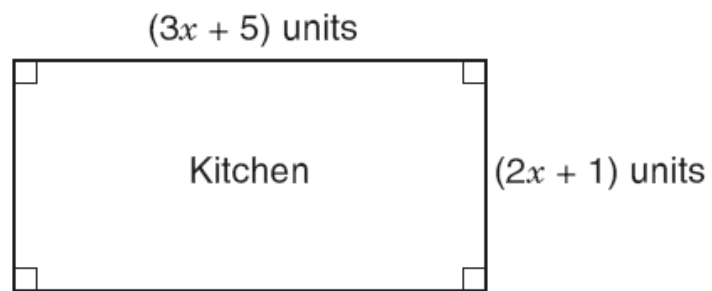


Using the dimensions given, find the approximate length of the side labeled p .

- A) 2.4 centimeters
- B) 7.3 centimeters
- C) 16.5 centimeters
- D) 19.6 centimeters

36.

Tammy drew a floor plan for her kitchen, as shown below.



Which expression represents the area of Tammy's kitchen floor in square units?

- A) $6x^2 + 3x + 5$
- B) $6x^2 + 13x + 5$
- C) $10x + 12$
- D) $5x + 6$

37.

A jar contains 6 red marbles and 10 blue marbles, all of equal size. If Dominic were to randomly select 1 marble without replacement and then select another marble from the jar, what would be the probability of selecting 2 red marbles from the jar?

A $\frac{9}{64}$

B $\frac{1}{8}$

C $\frac{3}{5}$

D $\frac{3}{8}$

38.

- 3 The table shows the results of a survey given to 450 graduating seniors about their educational plans after high school.

Educational Plans

Institution	Percent
University	44
Community college	26
Technical school	15
Undecided	15

Based on these data, which of the following statements is true?

- A Only 15 students have no future educational plans.
- B More students plan to attend a community college or technical school than plan to attend a university.
- C Fewer than half of the students plan to attend a university.
- D Fewer than one-fourth of the students plan to attend a community college.

39.

A recycling center pays \$0.35 per pound of glass that it receives. If students at Falcon High School want to raise \$500 in a glass-recycling project, what is a reasonable number of pounds of glass they must collect?

- A 750 lb
- B 175 lb
- C 500 lb
- D 1500 lb

40.

On a certain day the exchange rate of Mexican pesos for U.S. dollars was approximately 10 pesos for 1 dollar. If an exchange of 4,000 pesos was made that day, what was the approximate value of the exchange in dollars?

- A) \$ 40
- B) \$400
- C) \$4, 000
- D) \$40,000

Answers TEKS

1A	8.4A
2A	8.7D
3D	8.16B
4B	8.2B
5B	8.3B
6C	8.9A
7D	8.8A
8C	8.5A
9B	8.11B
10C	8.14B
11 A	A.5C
12E	A.8B
13C	A.10B
14B	A.11A
15D	A.2B
16B	A.4A
17A	A.5C
18B	A.4A
19C	A.6D
20A	A.7B
21C	A.7B
22A	A.8A
23A	A.2C
24D	A.10A
25B	A.2C
26C	A.5C
27E	A.1C
28B	A.9D
29 4	A.6E
30 -12	A6E