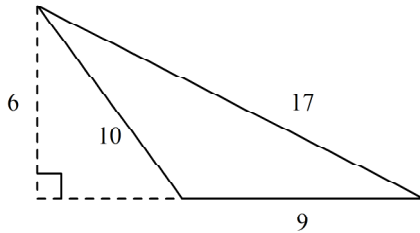


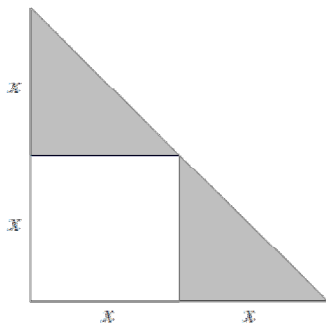
Mock CAHSEE Unit 6 Exam 2013-2014

1. What is the area, in square units, of the triangle shown below?



- A 27
- B 45
- C 54
- D 42

2. What is the area of the shaded region in the figure shown below if x is equal to 8 mi?

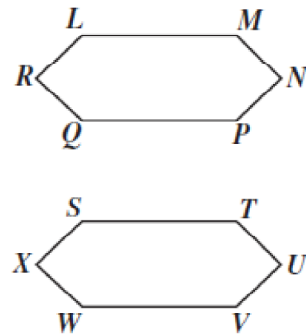


- A 128 mi^2
- B 64 mi^2
- C 96 mi^2
- D 32 mi^2

3. What is the multiplicative inverse of $\frac{xy^2}{z^2}$?

- A $\frac{z^2}{xy^2}$
- B $-xy^2z^2$
- C $\frac{z^2}{xy^2}$
- D $\frac{xy^2}{z^2}$

4. In the diagram below, hexagon LMNPQR is congruent to hexagon STUVWX.



Which side the same length as \overline{MN} ?

- A \overline{TU}
- B \overline{NP}
- C \overline{WX}
- D \overline{UV}

5. Ron plans to buy a t-shirt that has a regular price of \$16.99. It is on sale for 11% off, but Ron will have to pay 8% sales tax. What is the most reasonable estimate of the total cost of the t-shirt including tax?

A \$15.50
B \$16.50
C \$17.50
D \$18.50

6. Brenda bought a car for \$3000 and later sold it for a 40% profit. How much did she sell it for?

A \$4200
B \$4800
C \$1800
D \$7000

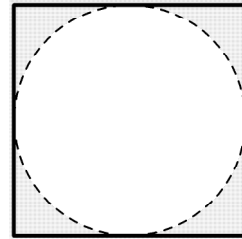
7. $8^5 \cdot 8^2 =$

A 8^7
B 8^{10}
C 64^7
D 64^{10}

8. If $|x| = 6$, what is the value of x ?

A -6 or 0
B -6 or 6
C 0 or 6
D -36 or 36

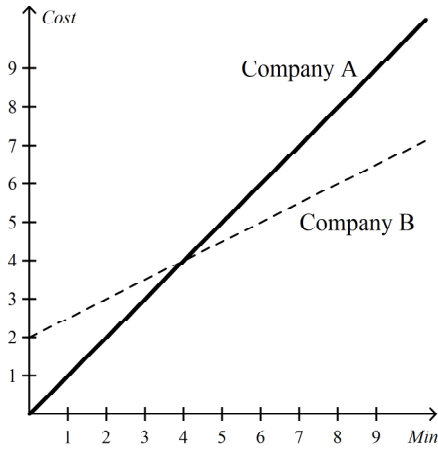
9.



In the figure above, the radius of the inscribed circle is 12 inches (in). What is the perimeter of the square?

A 24π in
B 144π in
C 48 in
D 96 in

10. The cost of a long distance call charged by each of two telephone companies is shown on the graph below.



Company A is less expensive than Company B for -

- A all calls.
- B 4 minute calls only.
- C calls less than 4 minutes.
- D calls longer than 4 minutes.

11. A bucket contains 3 bottles of tomato juice, 9 bottles of cream soda, and 8 bottles of chocolate milk. If Sophie randomly selects a bottle, what is the probability that she will select a drink other than chocolate milk?

- A $\frac{11}{20}$
- B $\frac{3}{5}$
- C $\frac{17}{20}$
- D $\frac{1}{8}$

12. Some students attend school 193 of the 365 days in a year. About what part of the year do they attend school?

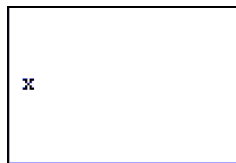
- A 19%
- B 53%
- C 47%
- D 193%

13. The cafeteria is offering choices for 3-item combination specials that must include a main dish, a vegetable, and a drink.

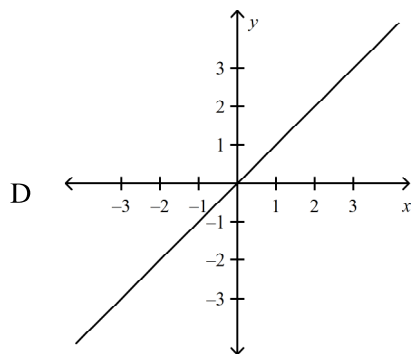
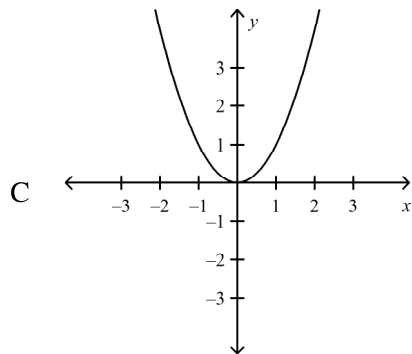
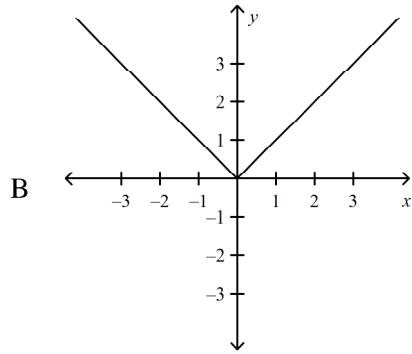
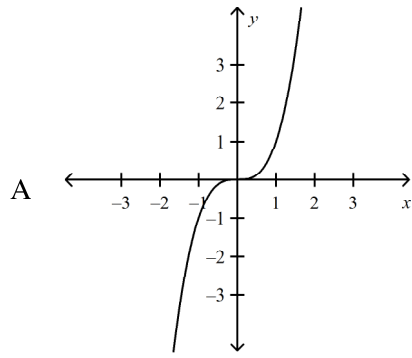
Main Dish	Vegetable	Drink
burger	carrots	milk
lasagna	Caesar salad	cranberry juice
tuna sandwich	mashed potatoes	lemonade
	mixed peppers	

How many 3-item combinations include a tuna sandwich and milk?

- A 3
- B 36
- C 4
- D 10
-
14. The length of the rectangle above is 8 units longer than the width. Which expression could be used to represent the area of the rectangle?



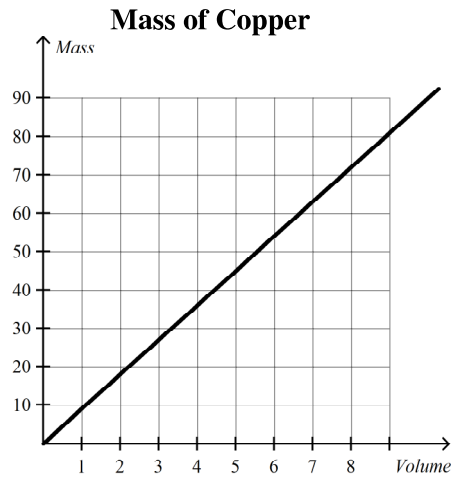
- A $4x + 16$
- B $x^2 + 16 + 64$
- C $x^2 + 8x$
- D $x^4 + 16$
15. Which of the following could be the graph of $y = x^3$?



16. Which of the following points lies on the line $y = x$?

- A $(-14, -14)$
- B $(-14, 14)$
- C $(14, -14)$
- D $(-14, 0)$

17. The graph below compares the mass (grams) of copper to its volume (milliliters).



What is the approximate mass of a block of copper that is 8 milliliters?

- A 67 grams
- B 72 grams
- C 77 grams
- D 82 grams

18. Which of the following inequalities represents the statement, "A number, x , decreased by 22 is less than or equal to 65?"

A $22 - x \geq 65$
B $22 - x \leq 65$
C $x - 22 \leq 65$
D $x - 22 < 65$

19. Rizzo typed a 800-word essay at an average rate of 40 words per minute. If she started typing at 3:05 p.m., and did not take any breaks, at what time did Rizzo finish typing the essay?

A 3:40 p.m.
B 3:20 p.m.
C 3:25 p.m.
D 4:00 p.m.

20. Which of the following is equivalent to the equation shown below?

$$\frac{16}{x} = \frac{7}{x-6}$$

A $16x = 7(x-6)$
B $23 = x + (x-6)$
C $16(x-6) = 7x$
D $x(x-6) = 112$

21. What is the value of $\frac{8(11-3)}{3(2)+x} + 11$ when $x = 2$?

A 8
B 19
C 88
D 21

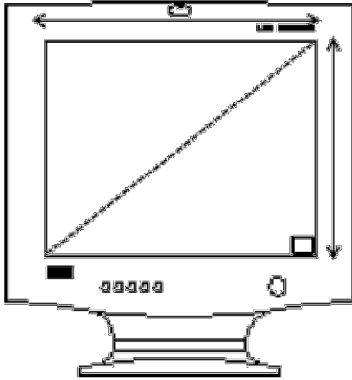
22. A worker at a tool factory packs hammers in boxes that weigh 2 pounds when empty. The average hammer weighs 0.5 lb and the total weight of a box filled with hammers is 19.5 lb. How many hammers are packed in each box?

A 22
B 35
C 39
D 43

23. A gallon is approximately equal to 18.62 cups. Approximately how many cups are there in 5 gallons?

A 3.72
B 13.62
C 23.62
D 93.1

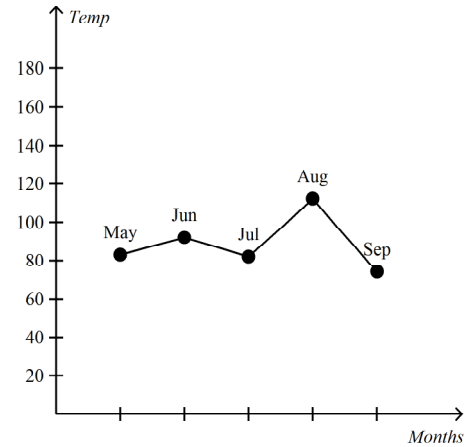
24. The size of a computer monitor is measured along its diagonal. A 15-inch computer monitor is shown below.



If the computer monitor shown above has a diagonal of 15 inches and is 12 inches wide, what is the height, in inches of the monitor?

- A $\sqrt{3}$
- B 9
- C 6
- D $\sqrt{27}$

25. Meteorologists recorded the average temperature in California over the summer. The data is shown below.



Which month had the greatest decrease in the average temperature over that of the previous month?

- A Jun
 - B Jul
 - C Aug
 - D Sep
26. The list below shows the number of books read by each of the students in Ms. Colfer's 1st grade classroom in the month of November.

24, 28, 19, 24, 44, 28, 24, 68, 44

What is the mode of these data?

- A 19
- B 24
- C 28
- D 44

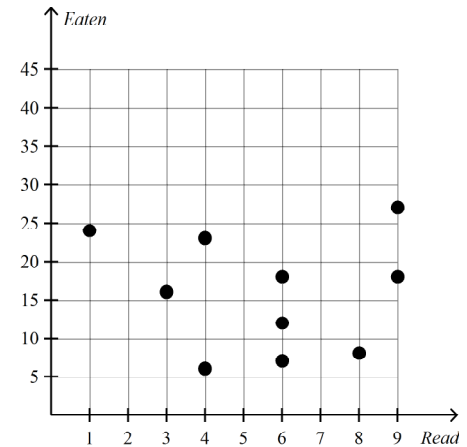
27. What is the x -coordinate of the solution to the following pair of equations?

$$\begin{cases} 3y + 2x = -5 \\ x = -5y - 13 \end{cases}$$

- A 2
B -28
C 7
D no solution
28. A shark is 5 meters long. About how long is the shark in feet and inches? (1 meter \approx 39 inches)

- A 15 ft 9 in
B 15 ft 3 in
C 16 ft 9 in
D 16 ft 3 in

29. The scatterplot below shows the number of magazines students read and the number of bags of chips those students ate in a month.



Which statement BEST describes the relationship between magazines read and bags of chips eaten?

- A As the number of magazines read increases, the bags of chips eaten increase as well.
B As the number of magazines read increases, the bags of chips eaten decrease.
C As the number of magazines read increases, the bags of chips eaten remain constant.
D There is no relationship between number of magazines read and bags of chips eaten.

30.

A shipping company delivery van traveled these distances during one week: 137.4, 106.4, 140.2, 176.5, and 171.3 miles. How many gallons of gas were used by the delivery van during the week?

What other information is needed in order to solve this problem?

- A The number of different deliveries the van made.
- B The cost of gasoline per gallon.
- C The average number of miles per gallon for the van.
- D The average speed traveled in miles per hour.

31. Solve for x .

$$5(3x + 5) = 31 + 9(4 - 3x)$$

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

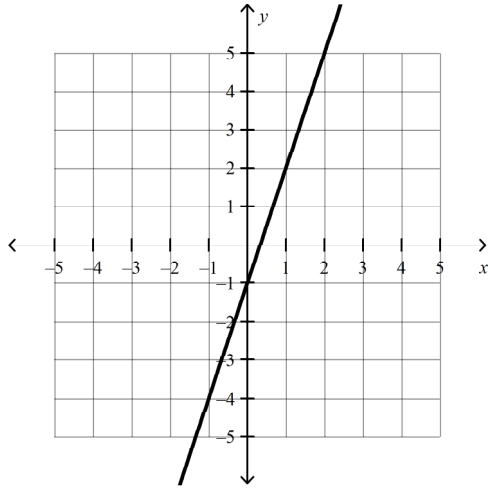
32. Bea uses $\frac{4}{5}$ of a cup of flour to make a batch of cupcakes. How many cups of flour does she need to make 35 servings of cupcakes?

- A $43\frac{3}{4}$
- B 28
- C $7\frac{4}{5}$
- D $34\frac{1}{5}$

33. Which of the following numerical expressions results in a negative number?

- A $2 + (-11) + (-3)$
- B $(9) - (-3) + (2)$
- C $(-11)(-3)(2)$
- D $(-3) + (2) - (-11)$

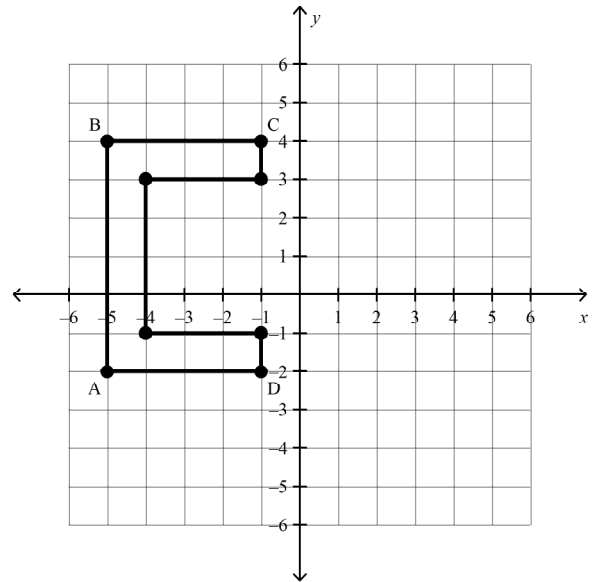
34. What is the slope of the line shown in the graph above?



- A -3
- B $-\frac{1}{3}$
- C $\frac{1}{3}$
- D 3
35. Lorenzo is the manager of the rugby team and he tracks the total number of points scored per game. In the first three games, the team scored 45, 54, and 21 points respectively. What was the mean number of points scored per game?

- A 21
- B 45
- C 40
- D 54

36. Based on the graph shown below, what will be the coordinates of point A after the reflection across the y-axis?



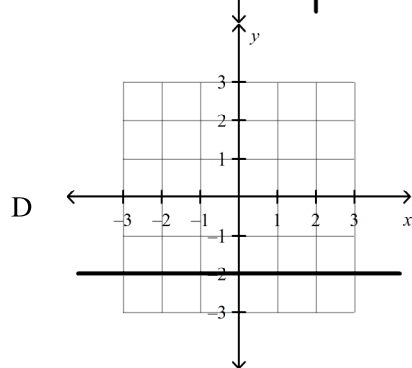
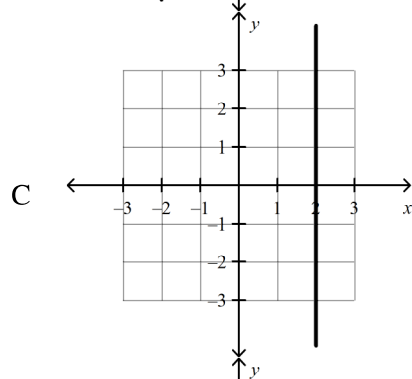
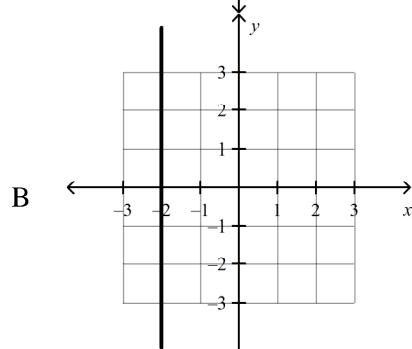
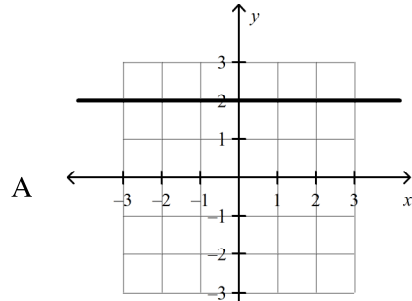
- A $(-5, 2)$
- B $(5, 2)$
- C $(-5, -2)$
- D $(5, -2)$
37. The weekly sales of a magazine increased from 500,000 to 700,000. By what approximate percentage did the magazine sales increase?

- A 29%
- B 40%
- C 71%
- D 140%

38. A painting company estimates that painting a new house will take 1 person 36 hours. If 3 people work on the job and they each work 6-hour days, how many days are needed to complete the job?

- A 8
- B 2
- C 6
- D 4

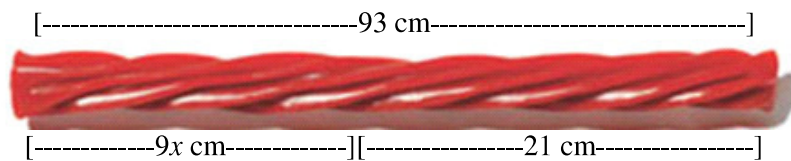
39. What is the graph of the equation $x = 2$?



Name: _____

ID: B

40. A piece of licorice 93 cm in length is cut into two pieces as shown in the diagram below.



What is the value of x ?

A 72

B 13

C 10

D 8

Mock CAHSEE Unit 6 Exam 2013-2014**Answer Section**

- | | |
|------------|----------------|
| 1. ANS: A | STA: 7MG 2.1 |
| 2. ANS: B | STA: 7MG 2.2 |
| 3. ANS: C | STA: AI 2.0 |
| 4. ANS: A | STA: 7MG 3.4 |
| 5. ANS: B | STA: 7MR 2.1 |
| 6. ANS: A | STA: 7NS 1.7 |
| 7. ANS: A | STA: 7NS 2.3 |
| 8. ANS: B | STA: 7NS 2.5 |
| 9. ANS: D | STA: 7MG 2.1 |
| 10. ANS: C | STA: 7AF 1.5 |
| 11. ANS: B | STA: 6SDAP 3.3 |
| 12. ANS: B | STA: 7NS 1.3 |
| 13. ANS: C | STA: 6SDAP 3.1 |
| 14. ANS: C | STA: AI 10.0 |
| 15. ANS: A | STA: 7AF 3.1 |
| 16. ANS: A | STA: AI 7.0 |
| 17. ANS: B | STA: 7AF 1.5 |
| 18. ANS: C | STA: 7AF 1.1 |
| 19. ANS: C | STA: 7AF 4.2 |
| 20. ANS: C | STA: AI 4.0 |
| 21. ANS: B | STA: 7AF 1.2 |
| 22. ANS: B | STA: 7AF 4.1 |
| 23. ANS: D | STA: 7MG 2.4 |
| 24. ANS: B | STA: 7MG 3.3 |
| 25. ANS: D | STA: 7SDAP 1.1 |
| 26. ANS: B | STA: 6SDAP 1.1 |
| 27. ANS: A | STA: AI 9.0 |
| 28. ANS: D | STA: 7MG 1.1 |
| 29. ANS: D | STA: 7SDAP 1.2 |
| 30. ANS: C | STA: 7MR 1.1 |
| 31. ANS: B | STA: AI 5.0 |
| 32. ANS: B | STA: 7NS 1.2 |
| 33. ANS: A | STA: 7NS 1.2 |
| 34. ANS: D | STA: 7AF 3.3 |
| 35. ANS: C | STA: 6SDAP 1.1 |
| 36. ANS: D | STA: 7MG 3.2 |
| 37. ANS: B | STA: 7NS 1.6 |
| 38. ANS: B | STA: 7MG 1.3 |
| 39. ANS: C | STA: AI 6.0 |
| 40. ANS: D | STA: 7AF 4.1 |