

SPIRAL REVIEWS
Day 76

1. If x and y are real numbers, with $x < y$, and $x + y > 0$, which of the following must be true?
- A. $x < 0$
 - B. $y > 0$
 - C. $|x| > |y|$
 - D. $x > 0$

2. An airplane flies x miles using y gallons of fuel. At this rate, how many gallons of fuel will be used for $x + 1000$ mile trip?

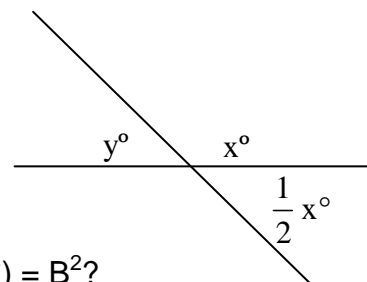
- A. $\frac{x(x + 1000)}{y}$
- B. $y(y + 1000)$
- C. $y + \frac{1000y}{x}$
- D. $\frac{xy}{x + 1000}$

3. The price of a car is x . The total paid (T) includes 5% sales tax and y for shipping. Which equation describes this situation?

- A. $.05x + y = T$
- B. $1.05(x)(y) = T$
- C. $1.05x + y = T$
- D. $x + \frac{x + y}{1.05} = T$

4. In the figure at the right, two lines intersect as shown. What is the value of “ x ”?

- A. 60
- B. 100
- C. 110
- D. 120



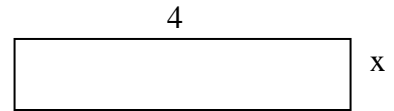
5. What is the value of $(7 \cdot 5^A)$ if $A^2 = A - 3$, and $(B^2) = B^2$?

- A. 35
- B. 96
- C. 196
- D. 343

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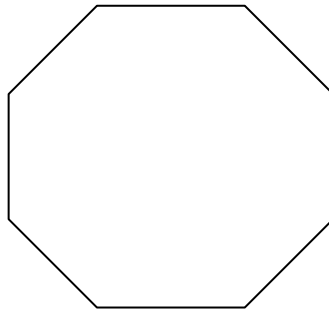
Show all steps. Use the grids below to record each answer.

1. A student averages 90% on 10 tests. If the lowest test score is dropped, the percent changes to 92%. What was the lowest test score?
2. If $x = \sqrt[3]{64}$, then what is x^2 ?
3. If the area of the rectangle at the right is 2, then what is "x"?



4. Simplify.
$$\frac{4\left(\frac{3}{4} + \frac{1}{2}\right) - 2\left(\frac{1}{8} + \frac{1}{2}\right)}{\frac{1}{8}}$$

5. The perimeter of an octagon with congruent sides is 32 feet. What is the length of each side?



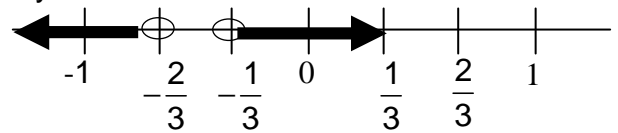
SPIRAL REVIEWS
Day 78

1. The length of a rectangle P is 40 percent longer than the length of rectangle Q, and the width of rectangle P is 40 percent shorter than the width of rectangle Q. What is the area of rectangle P?
- A. 40 percent greater than the area of rectangle Q
 - B. 16 percent greater than the area of rectangle Q
 - C. equal to the area of rectangle Q
 - D. 16 percent less than the area of rectangle Q

2. If $x = 8t - 3$, and $y = 4t^2$, then what is "y" in terms of "x"?

A. $\frac{x^2 + 3}{16}$ B. $\frac{16}{(x + 3)^2}$ C. $16(x - 3)^2$ D. $\frac{(x + 3)^2}{16}$

3. The graph shows the solution set to which inequality?



- A. $|6x + 3| > 1$
 - B. $|3x + 6| < -1$
 - C. $|3x + 6| < 1$
 - D. $|6x + 3| < -1$
4. A certain number has a tens unit of x and a units digit of y . If 5 is placed in between these two digits, then what is the value of the new number?
- A. $x + 5 + y$
 - B. $10x + 5 + y$
 - C. $10x + 50 + y$
 - D. $100x + 50 + y$
5. A painter takes t hours to paint 4 walls. At this rate, how many minutes would it take to paint "y" walls?
- A. $\frac{1}{15ty}$
 - B. $\frac{ty}{4}$
 - C. $\frac{15y}{t}$
 - D. $15ty$

SPIRAL REVIEWS
Day 79

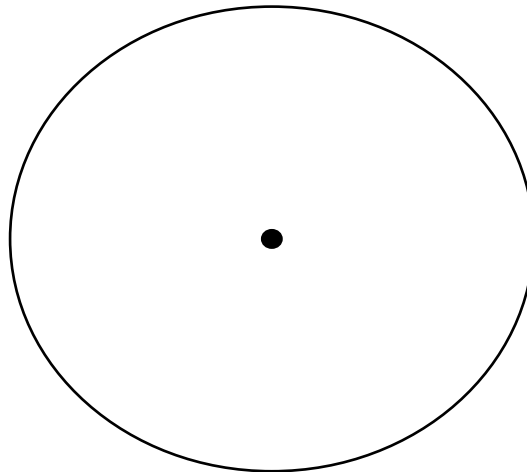
Show all steps.

The sales for Rock Music CD's for January through June are as follows:

Month	Sales	Percent	Degrees*
January	144		
February	126		
March	134		
April	114		
May	103		
June	115		
Total	736		

* Round to the nearest degree.

Complete the table and use the new information to construct a circle graph to illustrate Rock Music CD Sales for the months shown.



SPIRAL REVIEWS
Day 80

1. If $x!$ is defined as the product of all positive integers less than and equal to x (for example $5! = (5 \cdot 4 \cdot 3 \cdot 2 \cdot 1)$), then which of the following is (are) true?
- I. $8!$ is divisible by 10
 - II. $8!$ is an even number
 - III. $8!$ is divisible by 5
- A. II only
B. I and II only
C. II and III only
D. I, II and III
2. Point z is between a and b if and only if z , a and b are collinear and what else?
- A. $a = b$
B. $az + bz = 1$
C. $az + bz = ab$
D. $az + bz = bz$
3. If $a + b = 24$ and $ab = 80$, then what is $a^2 + b^2$?
- A. 104
B. 288
C. 416
D. 576
4. If $x = 10 - y^3$, x is greatest when y equals what number?
- A. -2
B. 0
C. 2
D. 3
5. The sum of two positive consecutive integers is y . In terms of y , what is the value of the smaller of these two integers?
- A. $\frac{y-1}{2}$
B. $y - \frac{1}{2}$
C. $\frac{y}{2}$
D. $\frac{y+1}{2}$