

Bell Work

**Get your calc!**

4/22/2015

Juan jumped off of a cliff into the ocean while vacationing with some friends. His height as a function of time could be modeled by:

$$h(t) = -16t^2 + 16t + 480$$

where  $t$  is the time in seconds and  $h$  is the height in feet.

1. How high was Juan when he jumped?
2. How long did it take to land in the ocean?

$$h(t) = -16(t^2 - t - 30)$$

$$0 = -16(t-6)(t+5)$$

$t-6=0$   
 $t=6$

$t+5=0$   
 $t=-5$

	$t - 6$	
$t$	$t^2$	$-6t$
$5$	$5t$	$-30$

Please get out your EOC practice from  
yesterday.

10. What is the product of the following expression?

$$\rightarrow 2x(x^2 + x - 5)$$

A.  $2x^3 + x - 5$

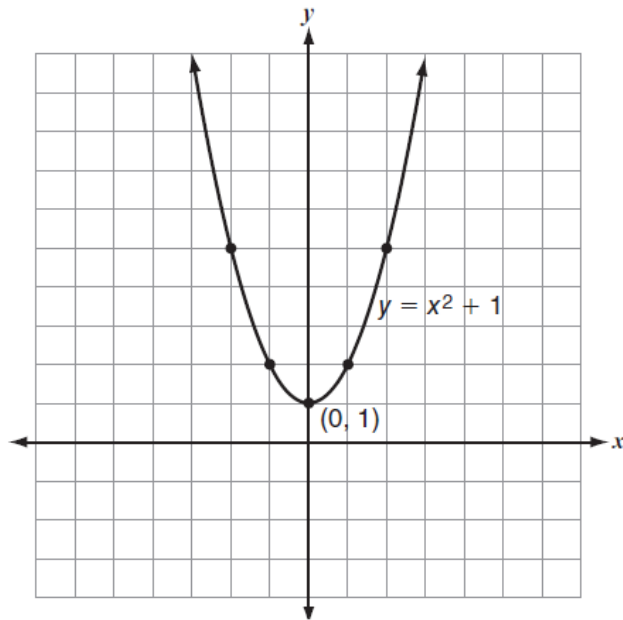
B.  $2x^3 + 2x - 10$

C.  $2x^3 + 2x^2 - 5x$

D.  $2x^3 + 2x^2 - 10x$

	$x^2$	$x$	$-5$
$2x$	$2x^3$	$2x^2$	$-10x$

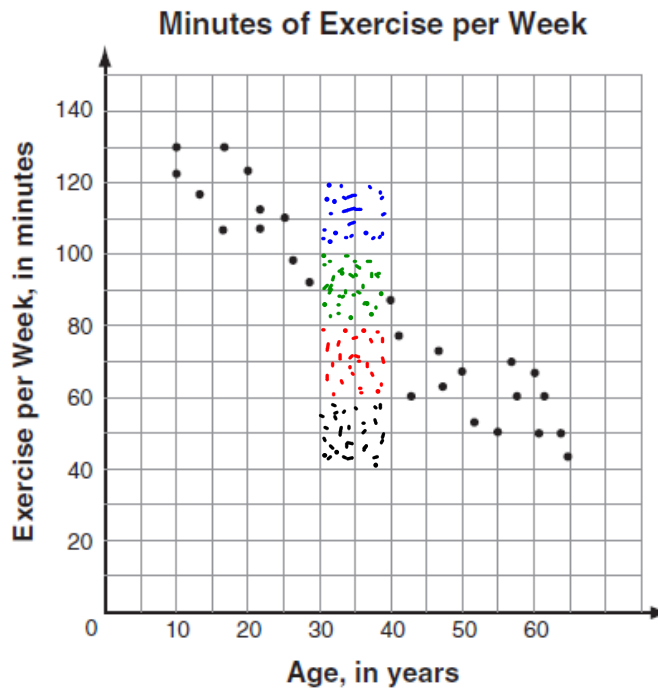
11. Beth and Jacob are graphing two equations on a coordinate grid. Beth has graphed the equation  $y = x^2 + 1$ .



If Jacob graphs  $y = x^2 + 3$ , where will his graph be in relation to the graph Beth made?

- A. 2 units up
- B. 3 units up
- C. 2 units to the left
- D. 3 units to the right

12. A survey was taken asking participants their age and the number of minutes they exercise per week. The results of the survey are shown in the scatterplot below.



The data for people who are 30 to 39 years of age are not displayed. Based on the scatterplot, how many minutes would a 30- to 39-year-old person be expected to exercise?

- A. 40–60 minutes
- B. 60–80 minutes
- C. 80–100 minutes
- D. 100–120 minutes

- Ben bought 8 notebooks for \$24.50. Some of the notebooks were \$2.50 each, and the others were \$3.25 each. If  $x$  represents the number of least expensive notebooks, which equation can be used to find the number of least expensive notebooks purchased?

~~A.~~  $\$5.75(8 - x) = \$24.50$

~~B.~~  $\$2.50(x - 8) + \$3.25x = \$24.50$

C.  $\$2.50x + \$3.25(8 - x) = \$24.50$

~~D.~~  $\$2.50x + \$3.25(x - 8) = \$24.50$

14. The number 18 is 24% of which number?

A. 4.32

B. 75

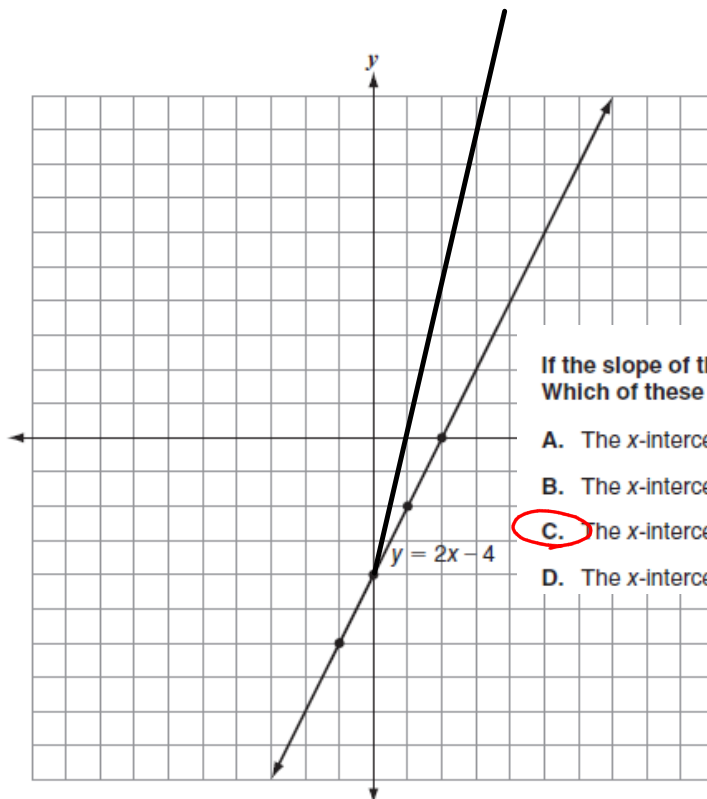
C.  $133\frac{1}{3}$

D. 432

$$\frac{18}{?} = 24\%$$

$$\frac{18}{x} = .24$$

15. The graph of  $y = 2x - 4$  is shown below.

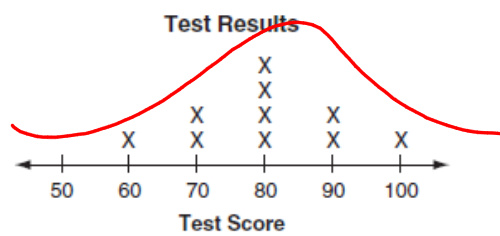


If the slope of the line is doubled, the new equation is  $y = 4x - 4$ . Which of these is a correct comparison of the two lines?

- A. The x-intercept and y-intercept change.
- B. The x-intercept and y-intercept stay the same.
- C. The x-intercept changes, and the y-intercept is the same.
- D. The x-intercept is the same, and the y-intercept changes.



16. The following line graph shows the test scores for 10 students on a unit exam.



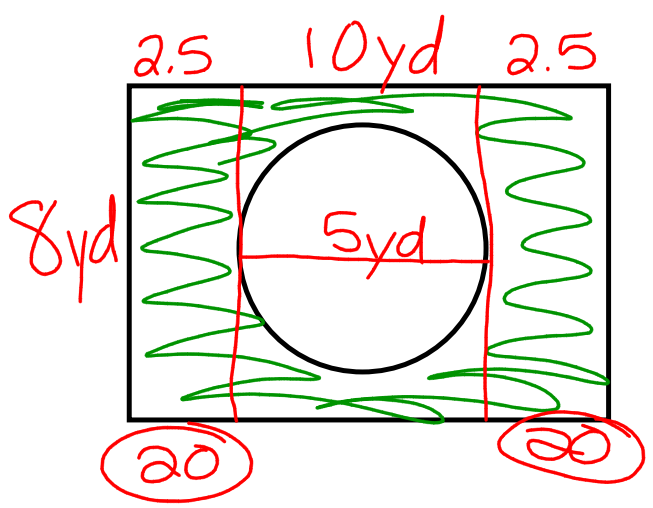
Which shape *most accurately* describes these data?

- A. The data are skewed to the left.
- B. The data are skewed to the right.
- C. a bimodal or "U"-shaped curve
- D. a normal or "bell"-shaped curve

17. Mary would like to plant grass in her backyard. Her backyard is a rectangle that measures 10 yd by 8 yd. In the middle of her backyard is a circular swimming pool that has a diameter of 5 yd. What is the area to be planted with grass, to the nearest tenth of a square yard?



- ~~A.~~ 1.5 yd<sup>2</sup>
- ~~B.~~ 19.6 yd<sup>2</sup>
- C. 60.4 yd<sup>2</sup>
- ~~D.~~ 80 yd<sup>2</sup>



18. Which expression represents the output of the  $n$ th term?

0	Input	1	2	3	4	5	$n$
-1	Output	1	3	5	7	9	

A.  $n + 2$

B.  $n + 11$

C.  $2n + 1$

D.  $2n - 1$

19. What is the solution to the equation?

$$-12 = 6 + \frac{2}{3}y$$

A. -27

B. -24

C. -12

D. -9

$-6 - 6$

$(\frac{3}{2}) - 18 = (\frac{3}{2}) \frac{2}{3} y$

$-27 = y$

## Quiz from Friday

You may do quiz re-works

