

Algebra I/Data Analysis  
 Quarter 1 Assessment  
 ~ ~ REVIEW ~ ~

1. For the following sequence, what will be the 7<sup>th</sup> term? What will be the 10<sup>th</sup> term?

Term	1	2	3	4	...	7	...	10
Sequence	6	11	16	21	...	?	...	?

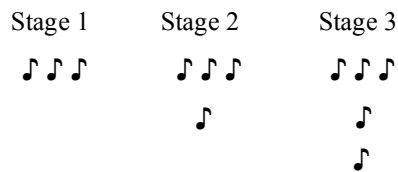
2. The table below shows the total number of vehicles passing through an intersection.

**VEHICLES PASSING THROUGH AN INTERSECTION**

Time	Total Number of Vehicles
6:30	18
6:40	41
6:50	64
7:00	87

If the pattern continues, what will be the total number of vehicles by 7:30?

- A. 110                      B. 133                      C. 156                      D. 179
3. Look at the pattern below:



If the pattern continues, how many notes will be used in the pattern in the 9<sup>th</sup> stage?

4. Simplify each expression.

a)  $\frac{8 \div 4 \cdot 3}{15 - 3}$

b)  $\frac{10 - (5 - 3(-2))}{5 + 3(-4)}$

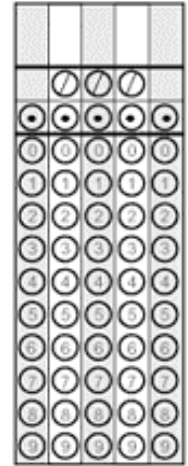
c)  $2(x - 5) - 5(3 - 4x)$

d)  $-4x - (6x - 7z)$

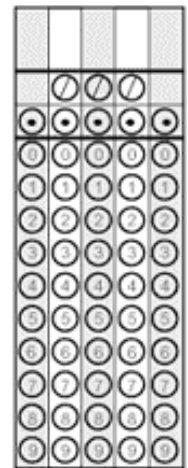


11. Amisha has saved \$80 to get a new set of speakers for her car. The speakers are on sale for \$239. If she earns \$11.50 an hour working at RJ's, how many more hours will she have to work in order to have enough money for the speakers?

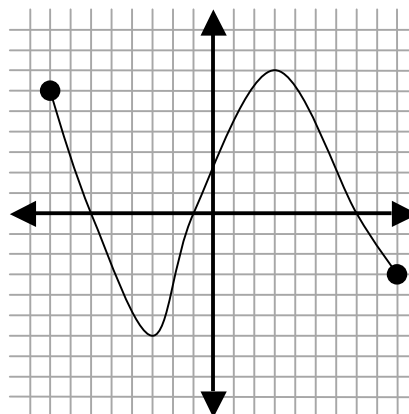
12. What is the value of  $p$  that satisfies the equation  $9 + 2p + 4p = 33$ ?



13. What is the value of  $y$  that satisfies the equation  $\frac{2}{3}y + 4 = 10$ ?

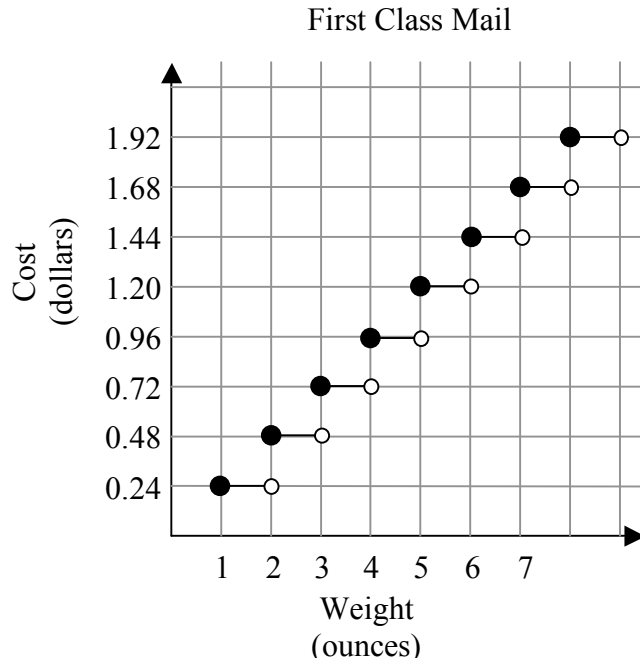


14. Identify the maximum of the following function.





18. The graph below shows the cost of mailing a first-class letter for various letter weights.



What is the cost of a 4 ounce letter?

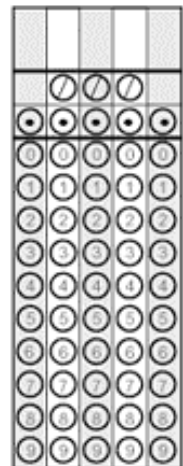
- A. \$0.72
- B. \$0.84
- C. \$0.96
- D. \$1.20

19. The formula for finding the Volume of a Square Based Pyramid is given below.

$$V = \frac{1}{3}b^2h$$

, where  $b$  is the length of the base, and  $h$  is the height.

What is the Volume in cubic feet of a Square Based Pyramid with base ( $b$ ) = 6 ft and height ( $h$ ) = 10 feet?



20. You are ordering shirts for your class. There are two companies to choose from. Company A charges \$3 per shirt and a one time \$12.50 set up charge. Company B charges \$4.25 per shirt.

a) Write an algebraic expression for the total cost of an order from Company A.

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b) Write an algebraic expression for the total cost of an order from Company B.

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c) Complete the table below based on the problem situation.

<b>Number of Shirts Ordered</b>	<b>Total Cost Company A</b>	<b>Total Cost Company B</b>
<i>Shirts</i>	<i>Dollars</i>	<i>Dollars</i>
1		
4		
10		
20		

d) For what number of shirts will the cost of the companies be the same? Use mathematics to determine your answer. Use words, your graph, or symbols in your explanation.

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