

Funky Friday #4

Name: _____

Date: _____

1. Which expression is equivalent to $16x^2 - 36$? 1. _____

A. $4(2x - 3)(2x - 3)$

B. $4(2x + 3)(2x - 3)$

C. $(4x - 6)(4x - 6)$

D. $(4x + 6)(4x + 6)$

2. What is the solution set of the equation $(x - 2)(x - a) = 0$? 2. _____

A. -2 and a B. -2 and $-a$ C. 2 and a D. 2 and $-a$

3. Analysis of data from a statistical study shows a linear relationship in the data with a correlation coefficient of -0.524 . Which statement best summarizes this result? 3. _____

A. There is a strong positive correlation between the variables.

B. There is a strong negative correlation between the variables.

C. There is a moderate positive correlation between the variables.

D. There is a moderate negative correlation between the variables.

4. Boyle's Law involves the pressure and volume of gas in a container. It can be represented by the formula $P_1V_1 = P_2V_2$. When the formula is solved for P_2 , the result is 4. _____

- A. $P_1V_1V_2$ B. $\frac{V_2}{P_1V_1}$ C. $\frac{P_1V_1}{V_2}$ D. $\frac{P_1V_2}{V_1}$

5. A radio station did a survey to determine what kind of music to play by taking a sample of middle school, high school, and college students. They were asked which of three different types of music they prefer on the radio: hip-hop, alternative, or classic rock. The results are summarized in the table below. 5. _____

	Hip-Hop	Alternative	Classic Rock
Middle School	28	18	4
High School	22	22	6
College	16	20	14

What percentage of college students prefer classic rock?

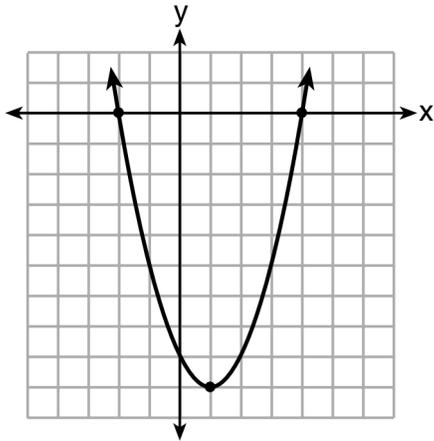
- A. 14% B. 28% C. 33% D. 58%

6. Which function has zeros of -4 and 2 ?

6. _____

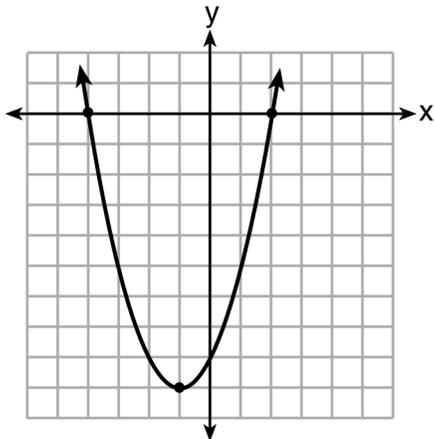
A. $f(x) = x^2 + 7x - 8$

B.



C. $g(x) = x^2 - 7x - 8$

D.



7. Which expression is equivalent to $2(3g - 4) - (8g + 3)$?

7. _____

- A. $-2g - 1$ B. $-2g - 5$ C. $-2g - 7$ D. $-2g - 11$

8. Solve the inequality below:

8. _____

$$1.8 - 0.4y \geq 2.2 - 2y$$

9. A family is traveling from their home to a vacation resort hotel. The table below shows their distance from home as a function of time.

9. _____

Time (hrs)	0	2	5	7
Distance (mi)	0	140	375	480

Determine the average rate of change between hour 2 and hour 7, including units.

10. Two friends went to a restaurant and ordered one plain pizza and two sodas. Their bill totaled \$15.95. Later that day, five friends went to the same restaurant. They ordered three plain pizzas and each person had one soda. Their bill totaled \$45.90.

10. _____

Write and solve a system of equations to determine the price of one plain pizza. [Only an algebraic solution can receive full credit.]

11. Tanya is making homemade greeting cards. The data table below represents the amount she spends in dollars, $f(x)$, in terms of the number of cards she makes, x .

x	$f(x)$
4	7.50
6	9
9	11.25
10	12

Write a linear function, $f(x)$, that represents the data.

Explain what the slope and y -intercept of $f(x)$ mean in the given context.

11. _____