

1. Which of the following is equal to $4^{10} + 4^{10} + 4^{10} + 4^{10} + 4^{11}$?
- 2^4
 - 2^{23}
 - 2^{16}
 - 2^{46}

2. Write out the first few powers of 2, 3, and 4

3. Write the 3 linear forms, label them and circle your favorite

4. $2x - 3y = -14$
 $3x - 2y = -6$

If (x, y) is a solution to the system of equations above, what is the value of $x+y$

5. The function f is defined by a polynomial. Some values of x and $f(x)$ are shown in the table below.

x	$f(x)$
0	3
2	4
4	0
5	2

What is a zero of this function?

What do you know about the multiplicity of this zero?

What is the y-intercept of this function?

Do you know all the x-intercepts of this function?

6. Tell me the possibility or number of real solutions for each variable for the situations below (acceptable answers are: no solution, one solution, two solutions, infinite solutions):

A system of equations with parallel lines and different y-intercepts

A quadratic equation where " $4ac$ " is greater than " b^2 "

A system of equations with parallel lines and the same x-intercepts

A quadratic equation that could be solved with the direct solve

A system of linear equations with 3 variables and 2 equations

A system of equations with 4 variables and 4 equations

A quadratic equation that is completely below the x-axis and never touches the x-axis

7. Calculate all of the following for this equation given

$$f(x) = x^2 + 4x - 3$$

Convert this to vertex form

Tell me the vertex

Calculate the vertex by a different method

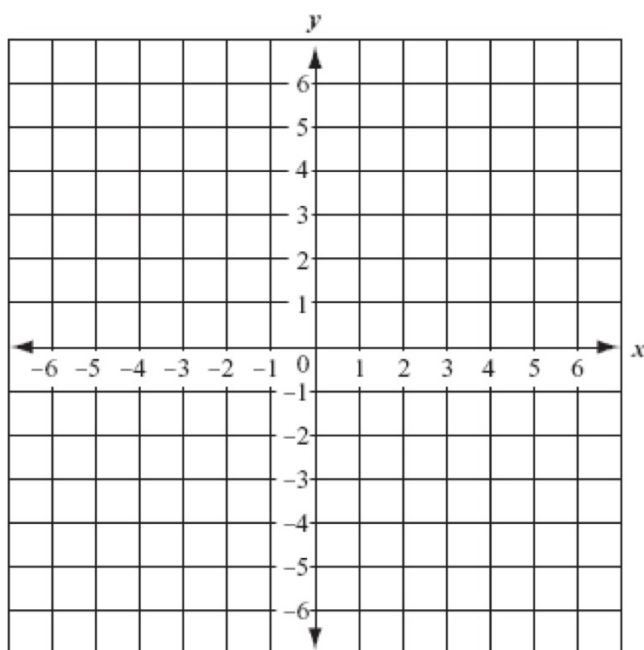
Show me how you'd convert it back to standard form now

Can you tell me the x-intercepts of the graph?

What about the y-intercept?

If you solved the quadratic formula, what information would you receive? Find that information

Graph it accurately:





SAT Math Homework

Name_____

If you divided this quadratic equation by " $kx + 4$ " and the solution began with " $5x$ ", what is the value of k ?

Go ahead and factor this equation