

# MATH RIDDLES

## Instructions:

1. Read the example math riddle, and read the explanation.
2. Solve Riddle #1 and Riddle #2. Record the work in your notebook, and be sure to draw a graph for each riddle.
3. Create a riddle of your own and solve it. Record all the work in your notebook.

## Example Riddle:

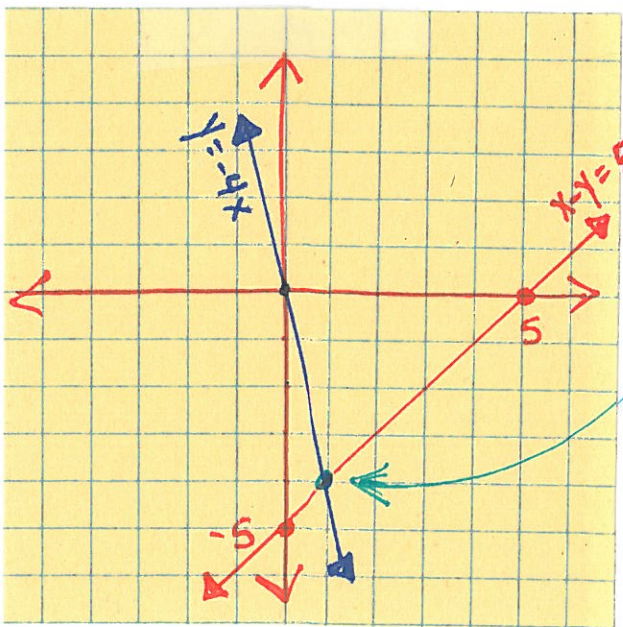
The difference of two numbers is 5. The second number is equal to -4 times the first number. What are the two numbers?

① write equations for each situation:

$$x - y = 5 \quad y = -4x$$

② Graph the equations:

③ Find the intersection:  
This is the solution.



④ Test the solution:

$$\begin{array}{l} 1 - (-4) = 5 \\ 1 + 4 = 5 \\ 5 = 5 \checkmark \end{array} \quad \begin{array}{l} -4 = -4(1) \\ -4 = -4 \checkmark \end{array}$$

$(1, -4)$  is the correct solution.

Riddle #1:

The sum of 2 numbers is 20, and the difference is 15.  
Find the value of the numbers.

Riddle #2.

Twice the value of one number plus another number is eight.  
When you subtract the numbers you get seven. What are the  
values of the two numbers?