Algebra Review #17 ***SHOW HOW YOU SOLVED EACH PROBLEM***

1. A teacher asks a student to solve the following equation on a quiz.

$$3(3x + 2) - 12 = 6x + 9$$

Step 1: $9x + 6 - 12 = 6x + 9$
Step 2: $9x - 6 = 6x + 9$
Step 3: $3x - 6 = 9$
Step 4: $3x = 15$
Step 5: $x = 12$

In which step does the student make his first mistake? Explain the correction for the step.

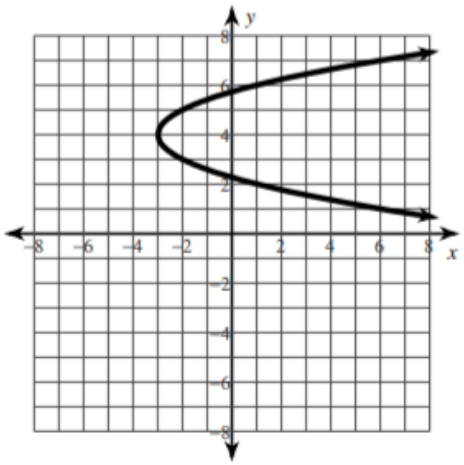
2. If $f(x) = (x - 4)^2 + 2x$ what is $f(2)$?

3. Tell whether the equation has one has one, none, or infinite solutions:

$$-4(2x - 1) = -2(4x - 1)$$

NAME _____

4. Look at the graph of a function. Complete the statement.

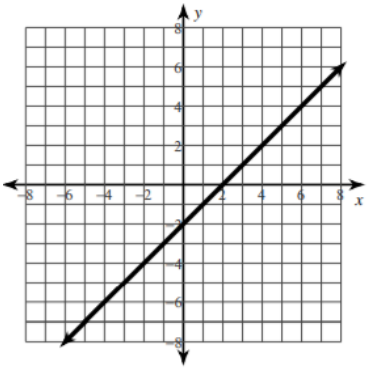


{x: x ≥ ▢ }

5. Solve the following equation:

$$3x - 2 = \frac{1}{4}(x + 4)$$

6. Observe the following graph.



Is the following graph a function? Why or why not?

What is the domain?

What is the range?

7. What is the value of the following:

$$-2\sqrt{98} - 11\sqrt{50}$$

8. Simplify the radical.

$$\sqrt{768}$$

9. Solve for variable y:

$$rx + sy = wv$$

10. Solve for variable c:

$$ay + bx - c = 0$$