



**ANALYZING EQUATIONS #1**



**PART A:** For each function below, fill in the missing inputs and outputs.

1.  $y = \frac{1}{2}x + 9$

| Input (x) | Output (y) |
|-----------|------------|
| 4         |            |
|           | 14         |

2.  $y = \frac{1}{4}x + \frac{3}{4}$

| Input (x) | Output (y) |
|-----------|------------|
| 9         |            |
|           | 2          |

3.  $y = -2x + 4$

| Input (x) | Output (y) |
|-----------|------------|
| 7         |            |
|           | 4          |

4.  $2x + 5y = 24$

| Input (x) | Output (y) |
|-----------|------------|
| 7         |            |
|           | 4          |

**PART B:** Analyze the functions listed in each box. The variable  $x$  represents the *input* and  $y$  is the *output*. Circle all of the statements that apply to the function listed in the box.

5.

$$y = 2x + 10$$

- a. When the input is 2 the output is 14
- b. When the input is 3 the output is 18
- c. It's graph is a straight line
- d. The y-intercept is (0,2)
- e.  $y$  is a function of  $x$

6.

$$y = -8x - 2$$

- a. The y-intercept is (-2,0)
- b. The y-intercept is (0,-2)
- c.  $y$  is a linear function
- d. When the input is -1 the output is 7
- e. When the input is  $\frac{1}{2}$  the output is -6

7.

$$y = -\frac{6}{5}x + \frac{1}{5}$$

- a.  $y$  is a *not* a function of  $x$
- b. When the input is 15 the output is -8
- c. When the input is 1 the output is -1
- d. When the input is 6 the output is -7
- e. The y-intercept is (1,-1)