

$$f(1) = -2(1) + 10$$

$$= 8$$

13) If  $f(x) = -2x + 10$ , find  $2f(1) + f(3)$ .

$$f(3) = -2(3) + 10$$

$$= 4$$

$$2f(1) + f(3)$$

$$= 2(8) + 4 = 16 + 4 = \boxed{20}$$

14) Is  $(-3, 1)$  the solution to the following system of equations?

$$-2x - 4y = 2 \rightarrow -2(-3) - 4(1) = 2 \rightarrow 6 - 4 = 2 \rightarrow 2 = 2$$

$$5y + 3x = -12 \rightarrow 5(1) + 3(-3) = -12$$

$$5 - 9 = -4$$

$$-4 \neq -12$$

Not a solution

Must check both eq!

15) Solve the following system of equations

$$A: \begin{aligned} x + 2y - z &= 4 \\ + 3x - y + 2z &= 5 \end{aligned}$$

$$4x + y = 9$$

$$B: \begin{cases} x + 2y - z = 4 \\ 3x - y + z = 5 \\ 2x + 3y + 2z = 7 \end{cases} \cdot 4$$

$$(4x + y = 9) \cdot 7$$

$$4x + 7y = 63$$

$$- 28x + 7y = 63$$

$$4x + 7y = 15$$

$$24x = 48$$

$$x = 2$$

$$B: (x + 2y - z = 4) \cdot 2 \rightarrow 2x + 4y - 2z = 8$$

$$2x + 3y + 2z = 7$$

$$2x + 3y + 2z = 7$$

$$4x + 7y = 15$$

$$x = \boxed{2}$$

$$y = \boxed{1}$$

$$z = \boxed{0}$$

$$4(2) + y = 9$$

$$8 + y = 9$$

$$y = 1$$

$$2 + 2(1) - z = 4$$

$$4 - z = 4$$

$$-z = 0$$

$$z = 0$$