

Key

Math 1

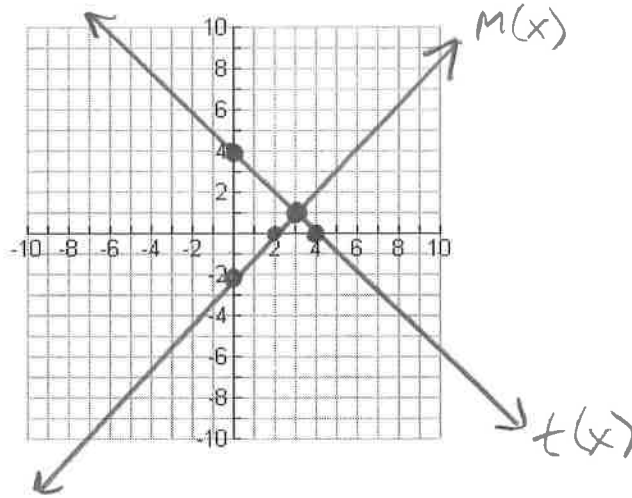
Name _____

3-2 Homework

Solve the systems in Numbers 1-3 by graphing. Write your answer as an ordered pair.

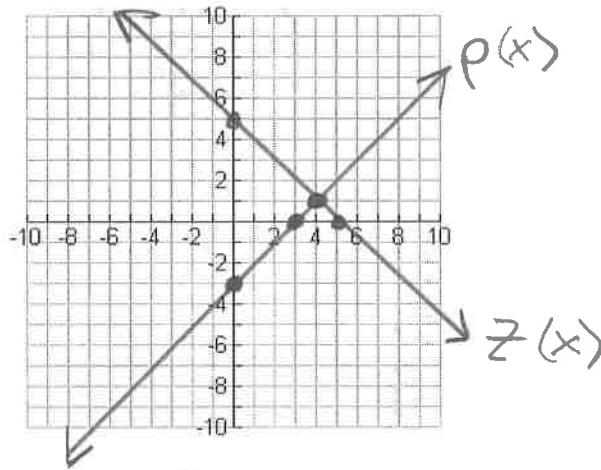
$$1. \begin{cases} t(x) = -x + 4 \\ m(x) = x - 2 \end{cases}$$

$(3, 1)$



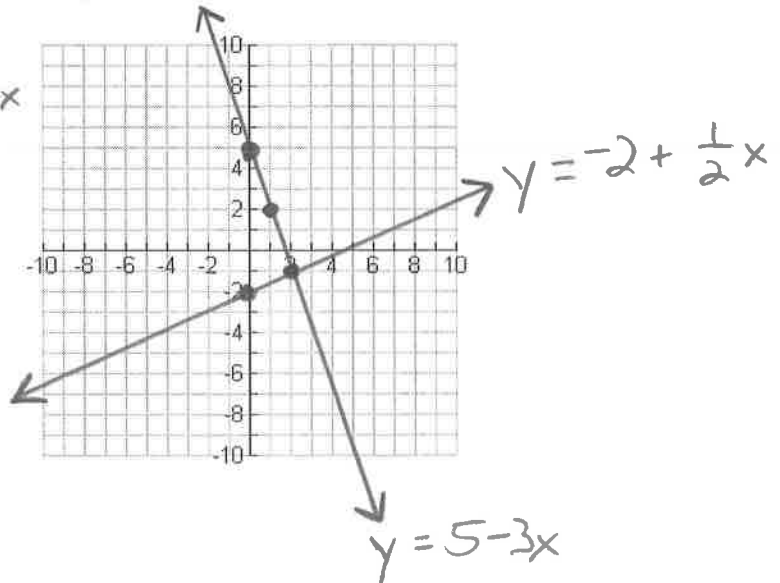
$$2. \begin{cases} x - p(x) = 3 \rightarrow p(x) = -3 + x \\ x + z(x) = 5 \rightarrow z(x) = 5 - x \end{cases}$$

$(4, 1)$



$$3. \begin{cases} 3x + y = 5 \rightarrow y = 5 - 3x \\ x - 2y = 4 \rightarrow -2y = 4 - x \\ \rightarrow y = -2 + \frac{1}{2}x \end{cases}$$

$(2, -1)$



Solve the systems in Numbers 4-6 using the substitution method. Write your answer as an ordered pair.

$$4. \begin{cases} x = f(x) - 1 \rightarrow x = y - 1 \\ 2x = 3g(x) \rightarrow 2x = 3y \end{cases}$$

$$\boxed{(-3, -2)}$$

$$2(y - 1) = 3y$$

$$2y - 2 = 3y$$

$$-2 = y$$

$$x = y - 1$$

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

$$x = -3$$

$$5. \begin{cases} f(x) = -x - 1 \rightarrow y = -x - 1 \\ 4x - 3y = 24 \rightarrow 4x - 3y = 24 \end{cases}$$

$$4x - 3(-x - 1) = 24$$

$$4x + 3x + 3 = 24$$

$$7x + 3 = 24$$

$$7x = 21$$

$$x = 3$$

$$y = -x - 1$$

$$y = -(3) - 1$$

$$y = -4$$

$$\boxed{(3, -4)}$$

$$6. \begin{cases} 4x - y = 9 \\ x - 3y = 16 \rightarrow x = 16 + 3y \end{cases}$$

$$4(16 + 3y) - y = 9$$

$$64 + 12y - y = 9$$

$$11y = -55$$

$$y = -5$$

$$\boxed{(1, -5)}$$

$$x = 16 + 3y$$

$$x = 16 + 3(-5)$$

$$x = 16 - 15$$

$$x = 1$$