

Warm Up

2/14

Solve for x:

$$7x + 5(4 - 3x) = 15 - 2(3x - 4)$$

$$7x + 20 - 15x = 15 - 6x + 8$$

$$-8x + 20 = 23 - 6x$$

$$\begin{array}{r} -8x \qquad \qquad \qquad +6x \\ \hline \end{array}$$

$$20 = 23 + 2x$$

$$\begin{array}{r} -23 \quad -23 \\ \hline \end{array}$$

$$\frac{-3}{2} = \frac{2x}{2}$$

$$\frac{-3}{2} = x$$

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What did we learn yesterday when we graphed equations written in $Ax + By = C$ form?

$$x + y = 10 \quad 4x - 3y = 15$$

These are linear equations.

Practice

How do we write equations in Slope - Intercept Form?

$$y = mx + b$$

Isolated y

$$3x + 5y = 10$$

Let's Practice:

$$\begin{array}{r} 7x + 3y = 12 \\ -3y - 3y \\ \hline 7x = 12 - 3y \\ -12 \quad -12 \\ \hline \frac{7x - 12}{-3} = \frac{-3y}{-3} \\ -\frac{7}{3}x + 4 = y \end{array}$$

$$\begin{array}{r} 7x + 3y = 12 \\ -7x \quad -7x \\ \hline \frac{3y}{3} = \frac{-7x + 12}{3} \\ y = -\frac{7}{3}x + 4 \end{array}$$

Writing Linear Equations

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$

2) $13x - 11y = -12$

3) $9x - 7y = -7$

4) $x - 3y = 6$

5) $6x + 5y = -15$

6) $4x - y = 1$

7) $11x - 4y = 32$

8) $11x - 8y = -48$