Converting a Linear Equation to Slope-Intercept Form $y = mx + b$

The goal of converting an equation to Slope-Intercept Form is **to isolate y on one side of the equation**. Thus, to convert to slope-intercept form, perform inverse operations on terms until y stands alone on one side.

Example

Convert $4x + 6y = 7$ to slope-intercept form. $4x + 6y = 7$

Subtract $4x$ from both sides $-4x \quad -4x$

$6y = -4x + 7$

Divide both sides by 6 $\frac{6y}{6} = \frac{-4x+7}{6}$

$y = \frac{-4}{6}x + \frac{7}{6}$

Simplify $y = -\frac{2}{3}x + \frac{7}{6}$

So, $\mathbf{4x + 6y = 7}$ converts to $\mathbf{y = -\frac{2}{3}x + \frac{7}{6}}$

Try These

1. $4x - 2y = -10$ 1. _____

2. $x + 6y = 24$ 2. _____

3. $3x - y = 8$ 3. _____

4. $5x + 7y = 20$ 4. _____

5. $2y - 3x = -42$ 5. _____

6. $5y + 2x = 15$ 6. _____

7. $6x = 14 - 2y$ 7. _____

8. $5x + 2 = \frac{1}{2}y + 6$ 8. _____

9. $7 - 2y = 6 - 2x$ 9. _____

10. $\frac{1}{3}y + 5 = 4 - x$ 10. _____