

## Slope-Intercept Form

AB-BLF 4

**Instructions:** Determine the slope and y-intercept of each linear function below. If the equation is not in "Slope-Intercept Form", then rearrange it so it is.

1  $y = 4x + 7$

Slope:  
4

y-intercept:  
7

2  $y + 2 = 5x$   
-2 -2

Slope:  
5

$y = 5x - 2$

y-intercept:  
-2

3  $y - 1 = -2x$   
+1 +1

Slope:  
-2

y-intercept:  
1

$y = -2x + 1$

4  $y = -x$

Slope:  
-1

$y = -1x + 0$

y-intercept:  
0

5  $y = 7 - 3x$

Slope:  
-3

y-intercept:  
7

$y = -3x + 7$

6  $(2)\frac{y}{2} = x(2)$

Slope:  
2

$y = 2x + 0$

y-intercept:  
0

7  $5 + y = 1 + 2x$   
-5 -5

Slope:  
2

y-intercept:  
-4

$y = 2x - 4$

8  $(3)\frac{y}{3} = \frac{x}{6}(3)$

Slope:  
1/2

$y = \frac{1}{2}x + 0$

y-intercept:  
0

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

Slope:  
2

y-intercept:  
2

$y = 2x + 2$

10  $y + x = 3 + x$   
-x -x

Slope:  
0

$y = (0x) + 3$

y-intercept:  
3

## Converting to Slope-Intercept Form

AB-BLF 5

**Instructions:** Convert each linear function into "Slope-Intercept Form" ( $y = mx + b$ ).

$$\begin{array}{r} 1 \\ 4x + 2y = 8 \\ -4x \quad -4x \end{array}$$

$$\frac{2y}{2} = \frac{-4x + 8}{2}$$

$$y = -2x + 4$$

$$\begin{array}{r} 2 \\ \frac{y}{2} - x = 4x - 6 \\ +x \quad +x \end{array}$$

$$(2) \frac{y}{2} = (5x - 6)(2)$$

$$y = 10x - 12$$

$$\begin{array}{r} 3 \\ \frac{3y}{3} = \frac{3 - 6x}{3} \end{array}$$

$$y = 1 - 2x$$

$$y = -2x + 1$$

$$\begin{array}{r} 4 \\ -2y = 6 - \frac{1x}{-2} \end{array}$$

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

$$y = \frac{1}{2}x - 3$$

$$\begin{array}{r} 5 \\ \frac{y}{2} - 4 = \frac{x}{3} \\ +4 \quad +4 \end{array}$$

$$(2) \frac{y}{2} = \left(\frac{x}{3} + 4\right)(2)$$

$$y = \frac{2}{3}x + 8$$

$$\begin{array}{r} 6 \\ y + 3 = \frac{x}{5} - 2y \\ +2y \quad +2y \end{array}$$

$$\frac{1}{3}(3y + 3) = \left(\frac{1}{5}x\right) \frac{1}{3}$$

$$y + 1 = \frac{1}{15}x$$

$$y = \frac{1}{15}x - 1$$

$$\begin{array}{r} 7 \\ \frac{2(y - 3)}{2} = \frac{x}{2} + \frac{10}{2} \end{array}$$

$$y - 3 = \frac{1}{2}x + 5$$

$$y = \frac{1}{2}x + 8$$

$$\begin{array}{r} 8 \\ (y - 3) = 4(x - 1) \end{array}$$

$$y - 3 = 4x - 4$$

$$y = 4x - 1$$