

Name : \_\_\_\_\_

### Slope Between Two Points

For 1–6 find the slope between two points using the formula shown below.  
Show all of your work & reduce.

$$\text{Slope } m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{Change in } y\text{'s}}{\text{Change in } x\text{'s}} = \frac{\text{Rise}}{\text{Run}} = \frac{\text{Fall}}{\text{Run}} = \frac{\Delta y\text{'s}}{\Delta x\text{'s}}$$

1. (10, 3) & (7, 9) #1: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

2. (4, -2) & (4, 3) #2: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

3. (2, 10) & (8, 7) #3: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

4. (7, 3) & (8, 5) #4: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

5. (12, 11) & (9, 5) #5: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

6. (6, -2) & (3, -2) #6: \_\_\_\_\_

$$m = \frac{\quad}{\quad} = \quad =$$

Find the slope between two points and then write an equation in Slope–Intercept Form ( $y = mx + b$ ).

Example:  $(5, -1)$  &  $(-10, -7)$

Step 1: Find the slope using the formula  $m = \frac{y_2 - y_1}{x_2 - x_1}$

$$m = \frac{\quad}{\quad} = \frac{\quad}{\quad} =$$

Step 2: Pick one of the points:  $(\quad, \quad)$

Step 3: Use the Slope you found in Step 1 and the point in Step 2 to substitute the values into  $y = mx + b$  and then solve for  $b$ .

$$\begin{aligned}(\quad) &= (\quad)(\quad) + b \\ &= \quad + b \\ &= b\end{aligned}$$

Step 4: Write your answer in Slope–Intercept Form  $y = \boxed{\quad}x + \boxed{\quad}$

For 7–12, find the slope between two points and then write an equation in Slope–Intercept Form ( $y = mx + b$ ). Show all of your work & reduce.

7.  $(-5, -9)$  &  $(3, 7)$  #7: \_\_\_\_\_

8.  $(6, -2)$  &  $(-3, -5)$  #8: \_\_\_\_\_

9.  $(1, 7)$  &  $(-7, -41)$

#9: \_\_\_\_\_

10.  $(5, -16)$  &  $(-3, 8)$

#10: \_\_\_\_\_

11.  $(8, 1.25)$  &  $(-4, -1.75)$

#11: \_\_\_\_\_

12.  $(1, 8)$  &  $(-9, -2)$

#12: \_\_\_\_\_