Name: Date: Period:

USING THE SLOPE FORMULA

1. Write Formula: $m = \frac{y_2 - y_1}{x_2 - x_1}$
2. Write Template: $m = \frac{(\quad) - (\quad)}{(\quad) - (\quad)}$
3. Label your TWO points: #1 #2 (x, y) and (x, y)
4. **PLOP** your values into proper spots
5. Solve your problem… ALWAYS change a double negative to a positive before combining and EITHER,

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Use Integer Rules OR **Use a Number Line**

If they are the SAME SIGN, **keep** the sign and ADD.

If they are DIFFERENT SIGNS, take the sign of the larger # and SUBTRACT.

Subtraction goes ← Addition goes →

Slope is ALWAYS a fraction. It represents the $\frac{change\ in\ y}{change\ in\ x}$, so both #s of the fraction have meaning.

Reduce your answer to lowest terms.

Two negatives in the fraction, simplify to BOTH positive.

If ONLY one negative #, move the negative SIGN ONLY to the top.

Examples:

Find the slope of the line that passes through the points (-7 , 5) and (3 , -2).

1. Write the formula: $m = \frac{y_2 - y_1}{x_2 - x_1}$
2. Write Template: $m = \frac{(\quad) - (\quad)}{(\quad) - (\quad)}$
3. Label (-7 , 5) and (3 , -2) — #1 x, y; #2 x , y
4. **PLOP** into template $m = \frac{(-2) - (5)}{(3) - (-7)}$
5. Solve: $m = \frac{-7}{10}$

Find the slope of the line that passes through the points (8 , -1) and (4 , 3).

1. Write the formula: $m = \frac{y_2 - y_1}{x_2 - x_1}$
2. Write Template: $m = \frac{(\quad) - (\quad)}{(\quad) - (\quad)}$
3. Label (8 , -1) and (4 , 3) — #1 x , y; #2 x , y
4. **PLOP** into template $m = \frac{(3) - (-1)}{(4) - (8)}$
5. Solve: $m = \frac{4}{-4} = \frac{-1}{1}$