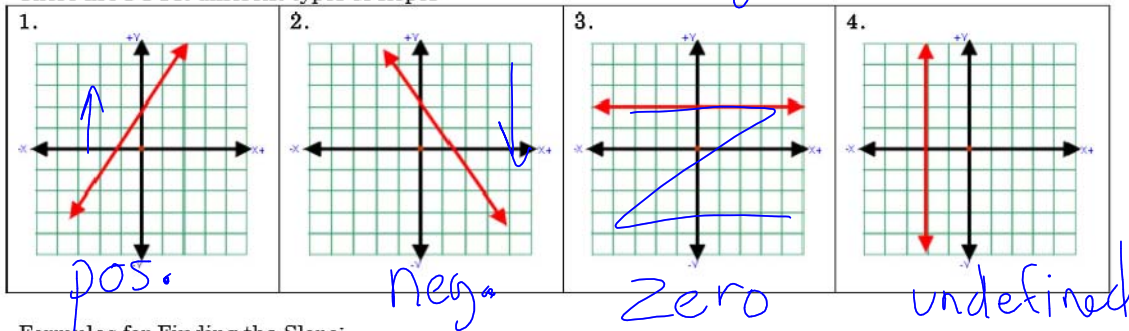


Name: _____
Slope _____

Date: _____
Period: _____

Slope
Left to Right

There are FOUR different types of slopes:



Formulas for Finding the Slope:

Slope = $\frac{\text{rise}}{\text{run}}$

Another letter that we use for slope is m .

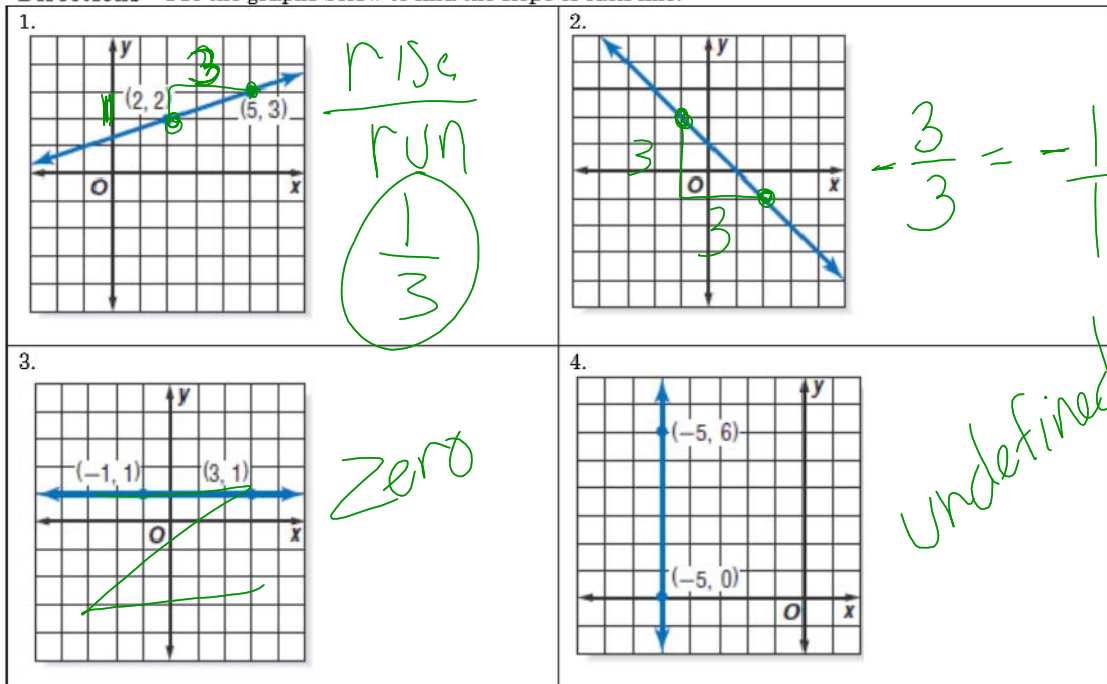
Example: Find the slope of the line that passes through $(-1, -1)$ and $(2, 1)$.

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{1 - (-1)}{2 - (-1)} = \frac{2}{3}$

x_1, y_1, x_2, y_2

Directions: Use the graphs below to find the slope of each line.



Directions: Find the slope of the line that passes through each pair of points.

5. A(3, 4), B(4, 6)
 x_1, y_1, x_2, y_2
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $\frac{6 - 4}{4 - 3} = \frac{2}{1}$

6. J(-8, 0), K(-8, 10)
 x_1, y_1, x_2, y_2
 $\frac{10 - 0}{-8 - (-8)} = \frac{10}{0}$ undefined
 run

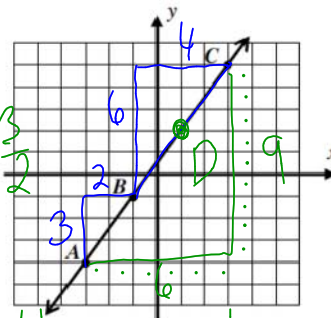
7. P(7, -1), Q(9, -1)
 x_1, y_1, x_2, y_2
 $\frac{-1 - (-1)}{9 - 7} = \frac{0}{2}$ rise zero

8. C(-6, -4), D(-8, -3)
 x_1, y_1, x_2, y_2
 $\frac{-3 - (-4)}{-8 - (-6)} = \frac{1}{-2} = -\frac{1}{2}$

9. Points A, B, and C are shown on the graph below.

(a) Calculate the slope for each of the following line segments. Write your answer in reduced form.

$\overline{AB} = \frac{3}{2}$ $\overline{BC} = \frac{6}{4} = \frac{3}{2}$ $\overline{AC} = \frac{9}{6} = \frac{3}{2}$



(b) Place point D at any point on line AC. Without calculation, what is the slope of AD? Explain.

$\frac{3}{2}$ Slope of the same line doesn't change

10. The following graph shows Raquel's distance from home as she drives to college.

$m = \frac{y_2 - y_1}{x_2 - x_1}$

(a) Determine the slope of this linear relationship using the slope formula and the two points that are shown.

$\frac{116 - 348}{2 - 6} = \frac{-232}{-4} = \frac{58 \text{ miles}}{1 \text{ hrs}}$

(b) What are the units of the slope? Hint - Consider the units of the numerator and denominator.

MPH

(c) What does this slope represent?

Speed at which she is traveling

