

# Slope

Find the slope of the line passing through two points using the formula:

$$\text{slope} = m = \frac{(y_2 - y_1)}{(x_2 - x_1)}$$

**Example:**

$$(1, 1) (4, 2)$$

$$(x_1, y_1) (x_2, y_2)$$

$$m = \frac{(2 - 1)}{(4 - 1)} = \frac{1}{3}$$

Then write the slope-intercept equation of the line.

1.  $(15, -12) (10, -2)$

2.  $(5, -12) (15, -2)$

3.  $(-3, 14) (-1, 28)$

4.  $(9, 6) (4, 6)$

5.  $(8, 14) (22, 9)$

6.  $(33, 59) (0, 0)$

7.  $(14, 21) (14, 6)$

8.  $(5, 17) (-18, 9)$

9.  $(16, -1) (8, 9)$

10.  $(-4, 2) (6, 9)$

11.  $(8, 4) (7, -3)$

12.  $(-1, -19) (-15, 4)$

13.  $(8, -1) (6, 6)$

14. Parallel lines have equal slopes. Two pairs of the lines indicated by the given points are parallel. Give the problem numbers of the parallel lines:

\_\_\_\_\_ & \_\_\_\_\_ ; \_\_\_\_\_ & \_\_\_\_\_ .

15. Perpendicular lines intersect to form right angles. (If they are not vertical or horizontal, then the product of the slopes equals  $-1$ .) Two pairs of the lines indicated by the given points are perpendicular. Give the problem numbers of the perpendicular lines:

\_\_\_\_\_ & \_\_\_\_\_ ; \_\_\_\_\_ & \_\_\_\_\_ .

16. What can be said about the relationship of any vertical line to any horizontal line?

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