5-1 Rate of Change and Slope

Find the slope of the line that passes through each pair of points:
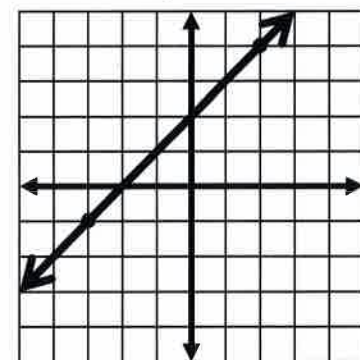
1. (-3, 4) and (5, -2)

$$m = \frac{-2-4}{5-(-3)} = \frac{-6}{8} = \boxed{-\frac{3}{4}}$$

2. (-3, -2) and (-3, 4)

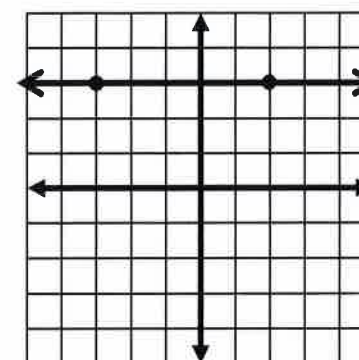$$m = \frac{4-(-2)}{-3-(-3)} = \frac{6}{0} = \boxed{\text{undefined}}$$

Find the slope of each line:

3.

Slope = ___1___

4.

Slope = ___0___

5. These points lie on the same line: $(-2, 8)$ and $(1, y)$. If the slope of the line is -3, find y.

$$\frac{y-8}{1-(-2)} = \frac{-3}{1} \qquad y - 8 = -3(3)$$
$$y - 8 = -9$$
$$\boxed{y = -1}$$