Algebra 1 5.1 Notes
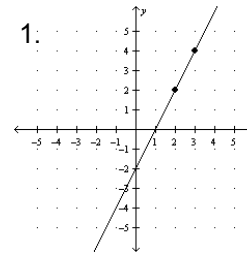
Rate of Change and Slope

* **Rate of Change**: Relationship between two changing quantities.
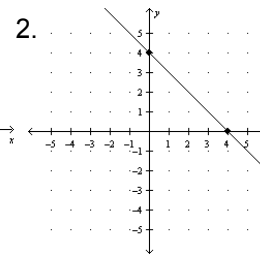
Rate of Change = $\dfrac{\text{change in the dependent variable}}{\text{change in the independent variable}}$

* **Slope**: Slope = $\dfrac{\text{vertical change}}{\text{horizontal change}} = \dfrac{\text{rise}}{\text{run}} = \dfrac{Y_2 - Y_1}{X_2 - X_1}$
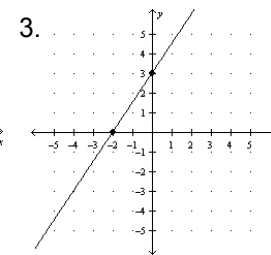
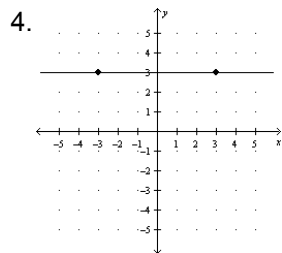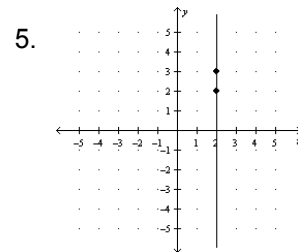**Find the slope of each line.**

1.

Slope: _____

2.

Slope: _____

3.

Slope: _____

H O Y V U X

H — HORIZONTAL

O — (ZERO)

Y — y =

V — VERTICAL

U — UNDEFINED

X — x =

Find the slope of each line.

4.

Slope: _____

5.

Slope: _____

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

6. (2,1), (0,0)

7. (-2, -3), (6,5)

8. (1,0), (-4, 2)

**Each pair of points lies on a line with the given slope.
Find x or y.**

9. (7, 4), (3, y); slope = $\dfrac{1}{4}$

10. (x, 5), (-3, 6); slope = -1