

Grade 8  
Unit 3 Vocabulary

Slope and Y-Intercept

(8.4A, 8.4B, 8.4C, and 8.5E)

Rate – a multiplicative comparison of two different quantities where the measuring unit is different for each quantity.

Comparison of two different units.

2 Orders  
3 Sessions

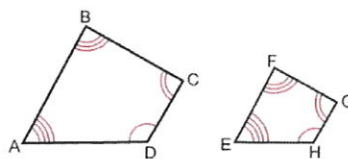
Unit rate – a ratio between two different units where one of the terms is equal to one.

Rate with a denominator of 1.

$\frac{16 \text{ miles}}{1 \text{ hour}}$

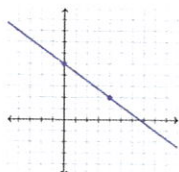
Similar Figures – shapes whose angles are congruent and side lengths are proportional (equal scale factor).

Same shapes that are different sizes.



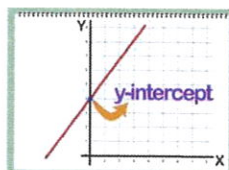
Slope – rate of change in  $y$  (vertical) compared to change in  $x$  (horizontal),  $y = mx + b$ . *Constant rate of change.*

How steep a straight line is.



y-intercept –  $y$ -coordinate of a point at which the relationship crosses the  $y$ -axis meaning the  $x$ -coordinate is equal to zero, denoted as  $b$  in  $y = mx + b$ .

Where a line crosses the  $y$ -axis  
(0, ?)



Dependent variable - A variable that depends on one or more other variables. (y)

The y variable.

	I	D
x	y	
1	15	
2	20	
3	25	
4	30	

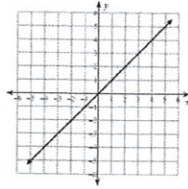
Independent variable - A variable in an equation that may have its value freely chosen without considering values of any other variable. (x)

The x variable.

I	D
x	y
1	15
2	20
3	25
4	30

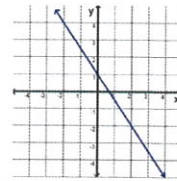
Proportional - Two variables are proportional if their ratio is constant. The points will make a straight line that contains (0,0) and passes through the origin.

Straight line through the origin (0,0)



Non-Proportional - Two variables are non-proportional if their ratio is not constant. The points do not contain (0,0) and do not pass through the origin.

Line NOT through the origin (0,0)



Direct variation - When two variables are related in such a way that the ratio of their values always remains the same.

A proportional relationship.

