

February 11, 2015 ^{5th} _{6th} Starter

1.

$$1\frac{1}{2} \text{ ft/sec} = \underline{18} \text{ in/sec}$$
$$\frac{\cancel{3 \text{ ft}}}{\cancel{2 \text{ sec}} \cdot \frac{\cancel{12 \text{ in}}}{\cancel{1 \text{ ft}}}}$$

2.

$$2.5 \text{ gal/hr} = \underline{10} \text{ qts/hr}$$
$$\frac{\cancel{2.5 \text{ gal}}}{\cancel{\text{hr}}} \cdot \frac{\cancel{4 \text{ qts}}}{\cancel{1 \text{ gal}}}$$

3.

$$20 \text{ ft/sec} = \underline{400} \text{ yd/min}$$
$$\frac{\cancel{20 \text{ ft}}}{\cancel{\text{sec}}} \cdot \frac{\cancel{1 \text{ yds}}}{\cancel{3 \text{ ft}}} \cdot \frac{\cancel{60 \text{ sec}}}{\cancel{1 \text{ min}}}$$

4.

$$60 \text{ mph} = \underline{88} \text{ ft/sec}$$
$$\frac{\cancel{60 \text{ mi}}}{\cancel{\text{hr}}} \cdot \frac{\cancel{1 \text{ hr}}}{\cancel{3600 \text{ sec}}} \cdot \frac{\cancel{5280 \text{ ft}}}{\cancel{1 \text{ mi}}}$$

60

Kleymissky

2/11 Slope - computing and graphing

60 sec Quick Write: What is SLOPE?

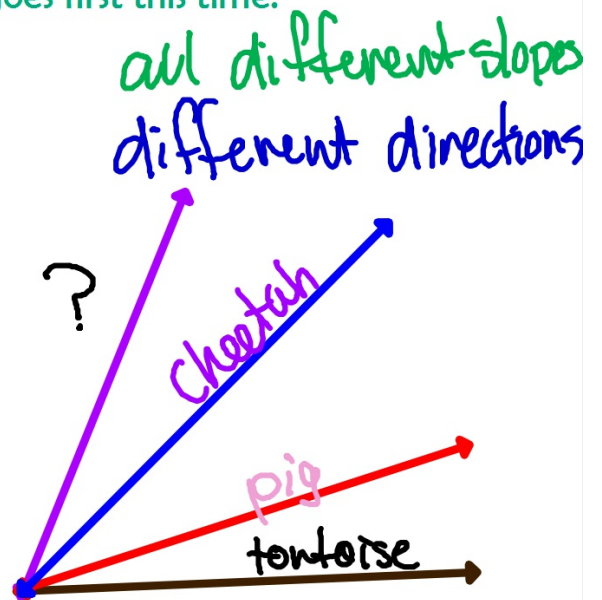
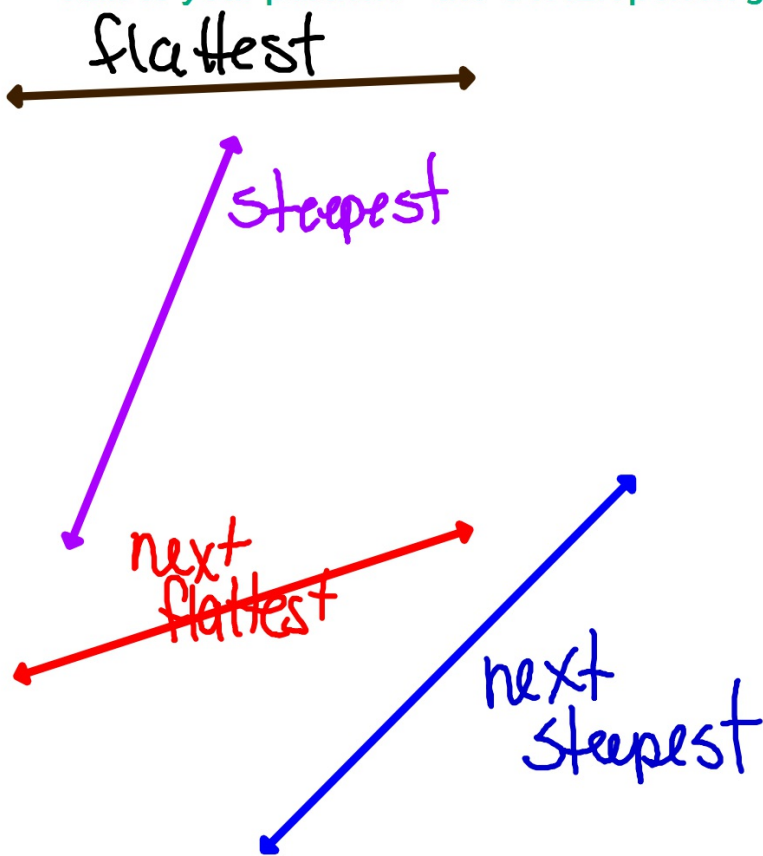
Pair-Share: the partner closest to the outside window or the front of the class goes first.

Ideas: hill Mtn
Ski slopes
up or down
Slow
Slant

graphing line that
connects dots
on a graph
diagonal
measures speed?
Steepness of a
line

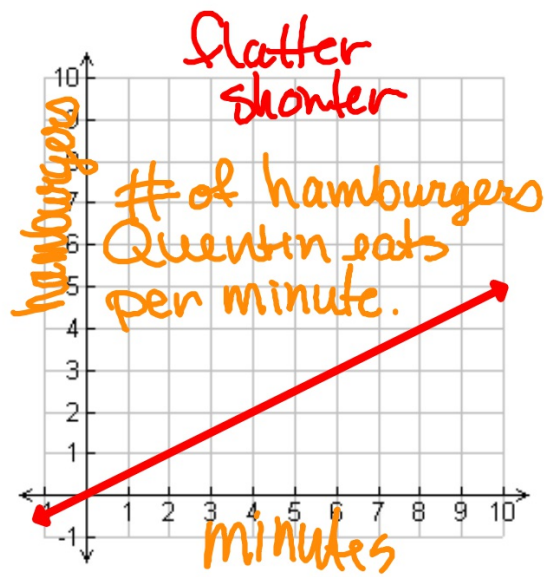
What can you tell about the slopes of these lines?

Talk to your partners - the OTHER person goes first this time.



all different slopes
different directions

What about these slopes?

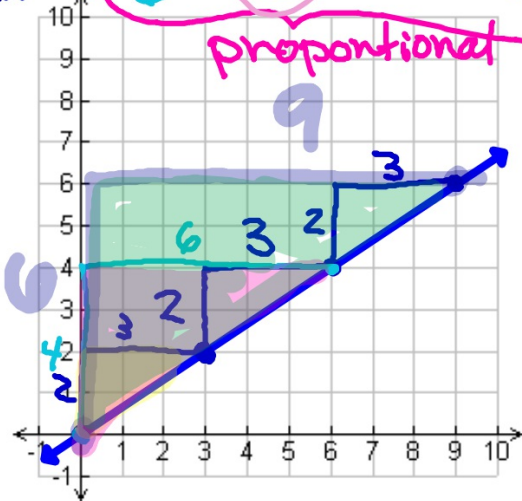


What rates could they represent?

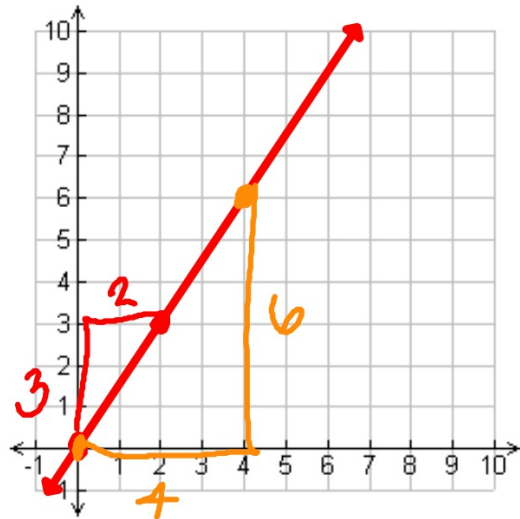
Slopes are represented by numbers...
 numbers that explain the rate.

rise $\rightarrow \frac{4}{6}$ $\frac{2}{3}$ \leftarrow up
 run $\rightarrow \frac{6}{9}$ $\frac{3}{3}$ \leftarrow over $\frac{6}{9}$

proportional



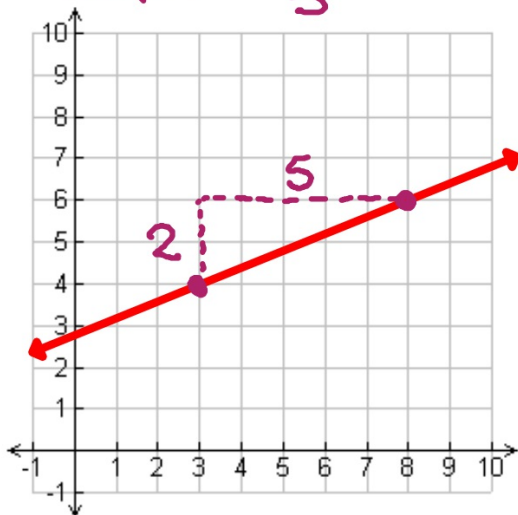
NOT improper
 slope = $\frac{3}{2}$ $\frac{6}{4}$



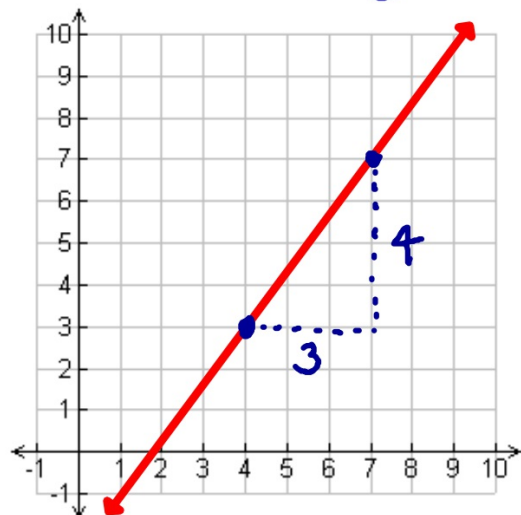
The line does not need to start at (0,0).
You can still compute the rate (slope) the same way.

Find the slopes of each line:

$$\text{slope} = \frac{2}{5}$$

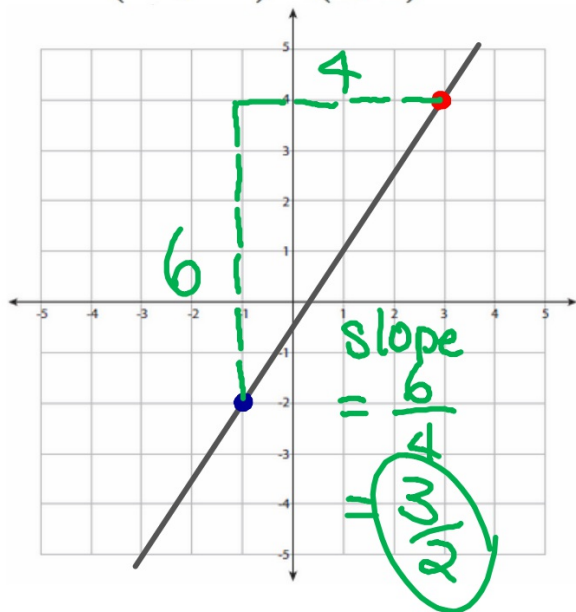


$$\text{slope} = \frac{4}{3}$$

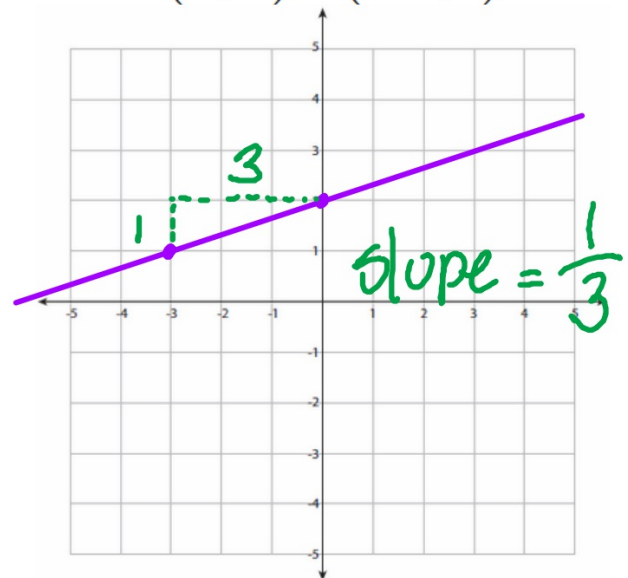


Graph these points, then find the slope of the line that goes through both of them.

$(-1, -2)$ $(3, 4)$



$(0, 2)$ $(-3, 1)$



Homework

Due

