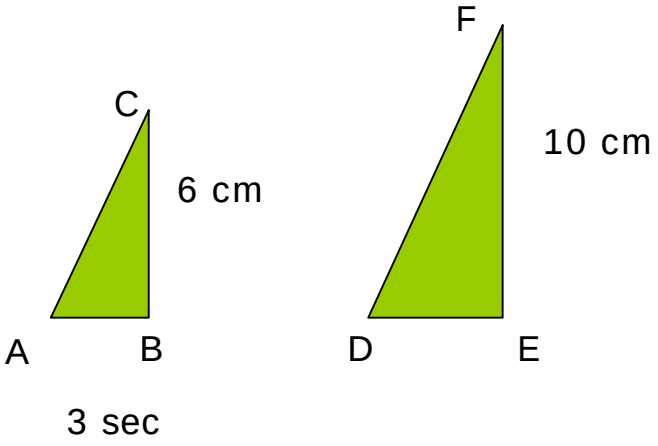
Name _____ Date _____

Math 8: Slope Exploration ___

1. If these two are similar triangles, what is the length of $\overline{DE}$?

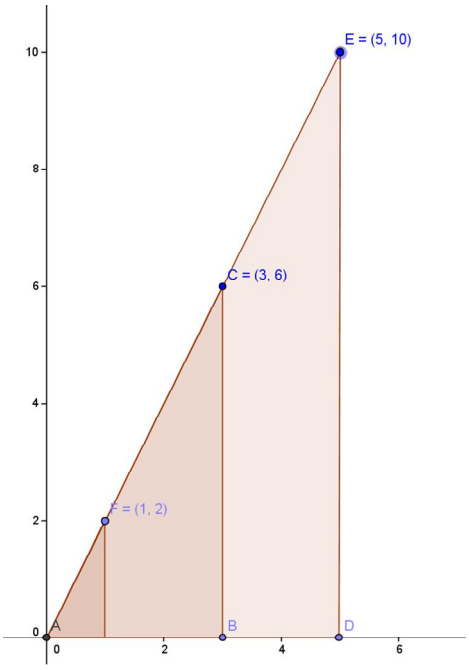


2. Find the unit rate for the triangles in cm per (1)sec.

Time	Distance
3 sec	6 cm
1 sec	

Imagine all of the similar triangles positioned so that their diagonals (hypotenuses) would all pass through (0,0).

3. If the unit rate is (1, 2) or 1:2, what is the constant of proportionality? Think y=kx.



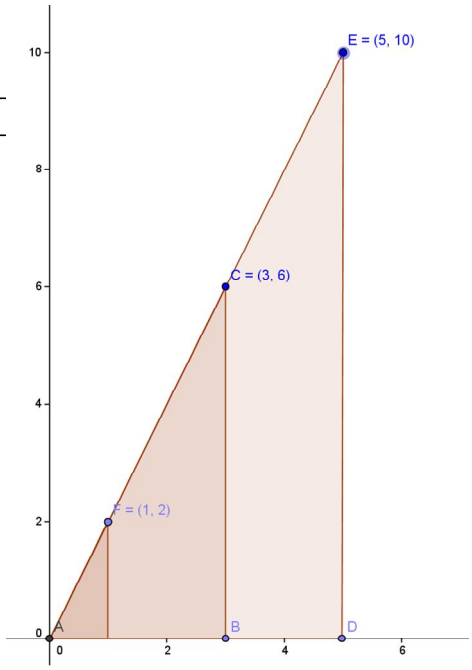
SLOPE :

_____

_____

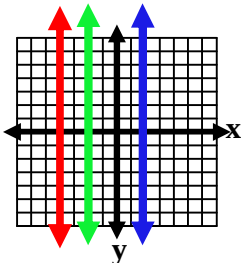
4. Write a slope ratio for the triangles.

5. Write the ratio as a fraction.

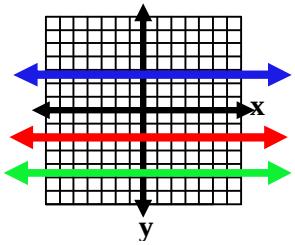


$$\frac{\text{vertical change}}{\text{horizontal change}} = \frac{\text{change in } y}{\text{change in } x}$$

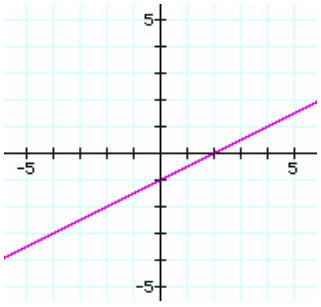
- **If a line is vertical, it has an undefined slope.**
  - **Only rises, no run!**



- **If a line is horizontal it has a slope equal to 0.**
  - **Only runs, no rise!**



6. Determine the slope of the line.



7. Determine the slope of the line.