

Name _____

LT13 Review - Comparing Linear Relationships

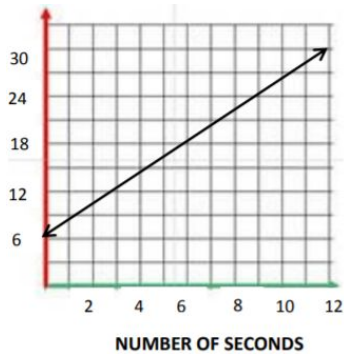
1. Fred and Gene are hang gliding. Fred is 700 feet above the ground and descending at 15 ft/s. Gene is descending as shown in the table.

Time (sec)	0	1	2	3
Height (ft)	575	565	555	545

- a.) Interpret Fred's rate of change and initial value:
- b.) Interpret Gene's rate of change and initial value:
- c.) Who started falling from the highest height?
- d.) Who is falling fastest?

2. Billy and his sister Brenda are racing 30 meters to their swimming pool. Billy is younger so his sister decides to give him a head start of 6 meters.

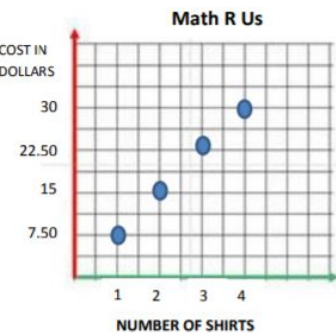
The graph below shows the distance that Billy runs during the race:



The equation $y = 3x$ can be used to represent the total distance in meters, y , that Brenda has run after x seconds.

- a.) Determine who is running at a faster speed.
- b.) How much faster are they running?
Show all reasoning.

3. The Math Madness club is buying t-shirts online. The price of buying x shirts from the company Math R Us is shown by the graph below. The advertisement shows the cost of buying the same shirt from Math Print Co. When should the club buy the shirts from Math R Us? When should the club buy shirts from Math Print Co?



MATH PRINT COMPANY
 High Quality Math T-shirts
\$10 for the first shirt!
\$6 for each shirt after that!



Explain your reasoning.

4. Mallory was given the following equation: $y = \frac{5}{2}x + 3$ in her math class. Thomas was given the following table:

x	-1	0	1	2	3
y	-1	3	7	11	15

Write a sentence that compares the rate of change for each of these situations.