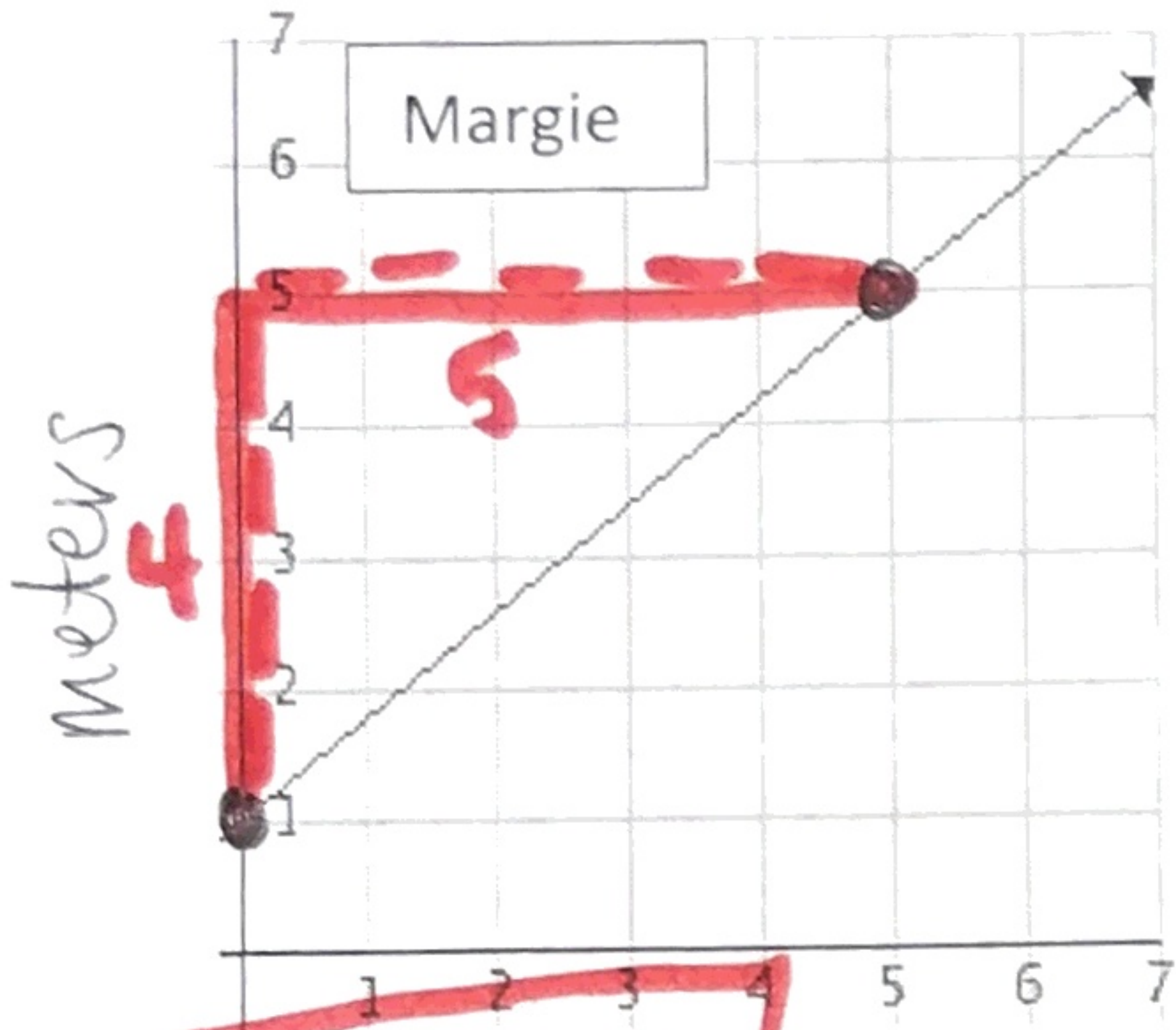


Unit 3a Day 3: Finding Rates of Change from a Graph

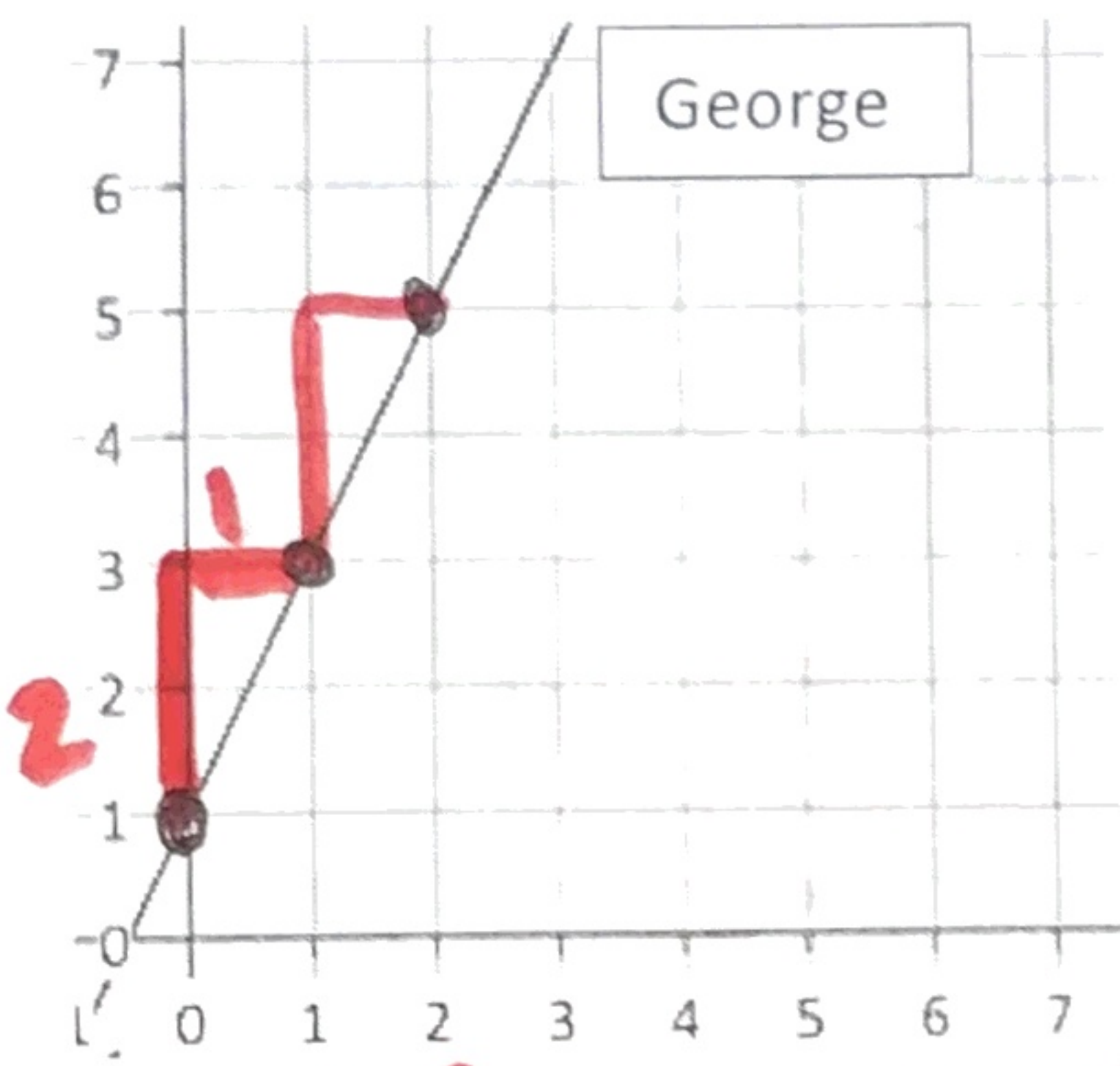
Focus Question: How do I find a rate of change on a graph?

A. Finding Rates of Change

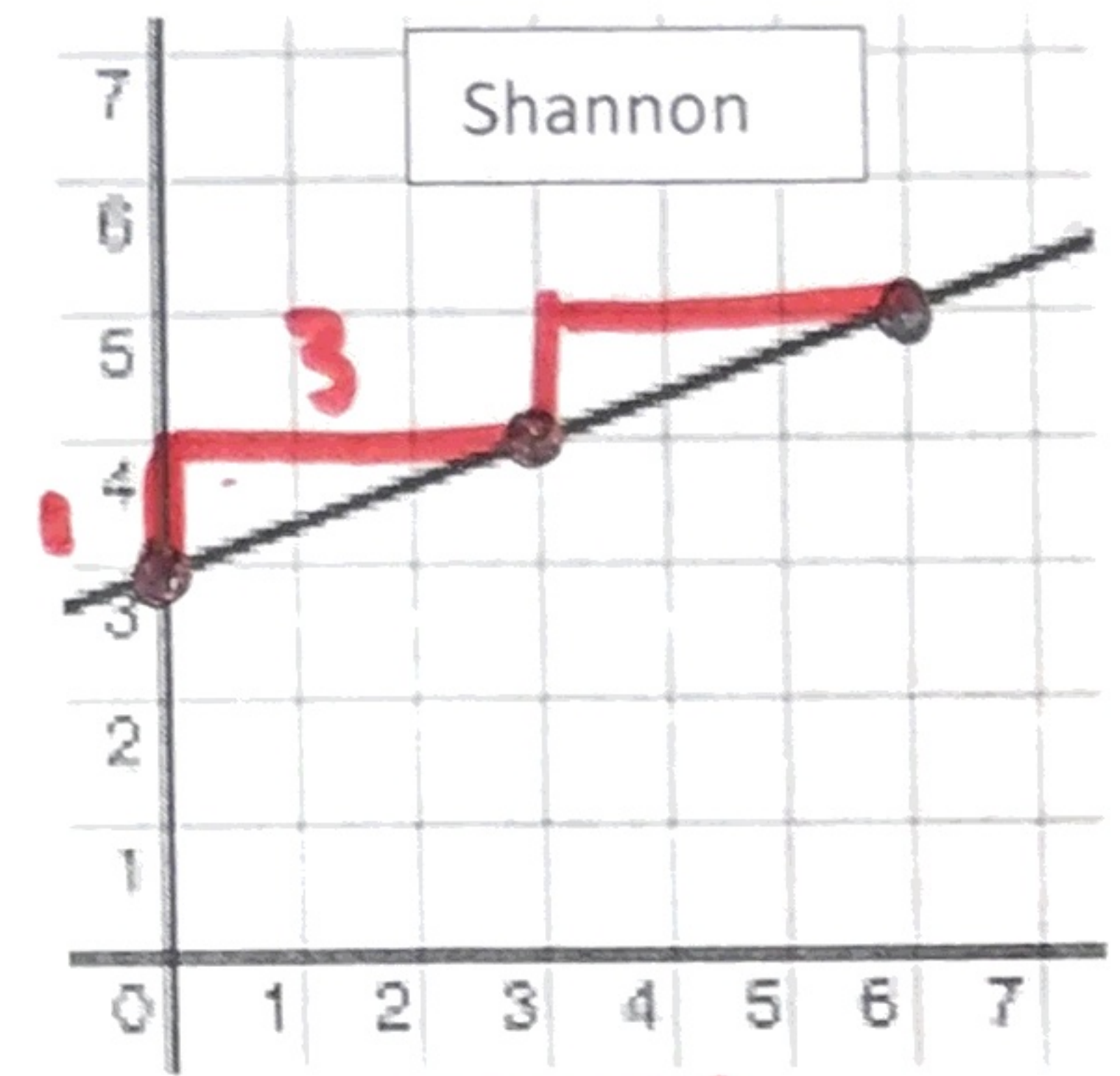
1. Three people were finding their walking speed using a high tech sensor that graphed their movement. Find how fast each person is walking away from the sensor?



$m = \frac{+4}{5}$



$m = \frac{+2}{1}$ or $m = 2$



$m = \frac{+1}{3}$

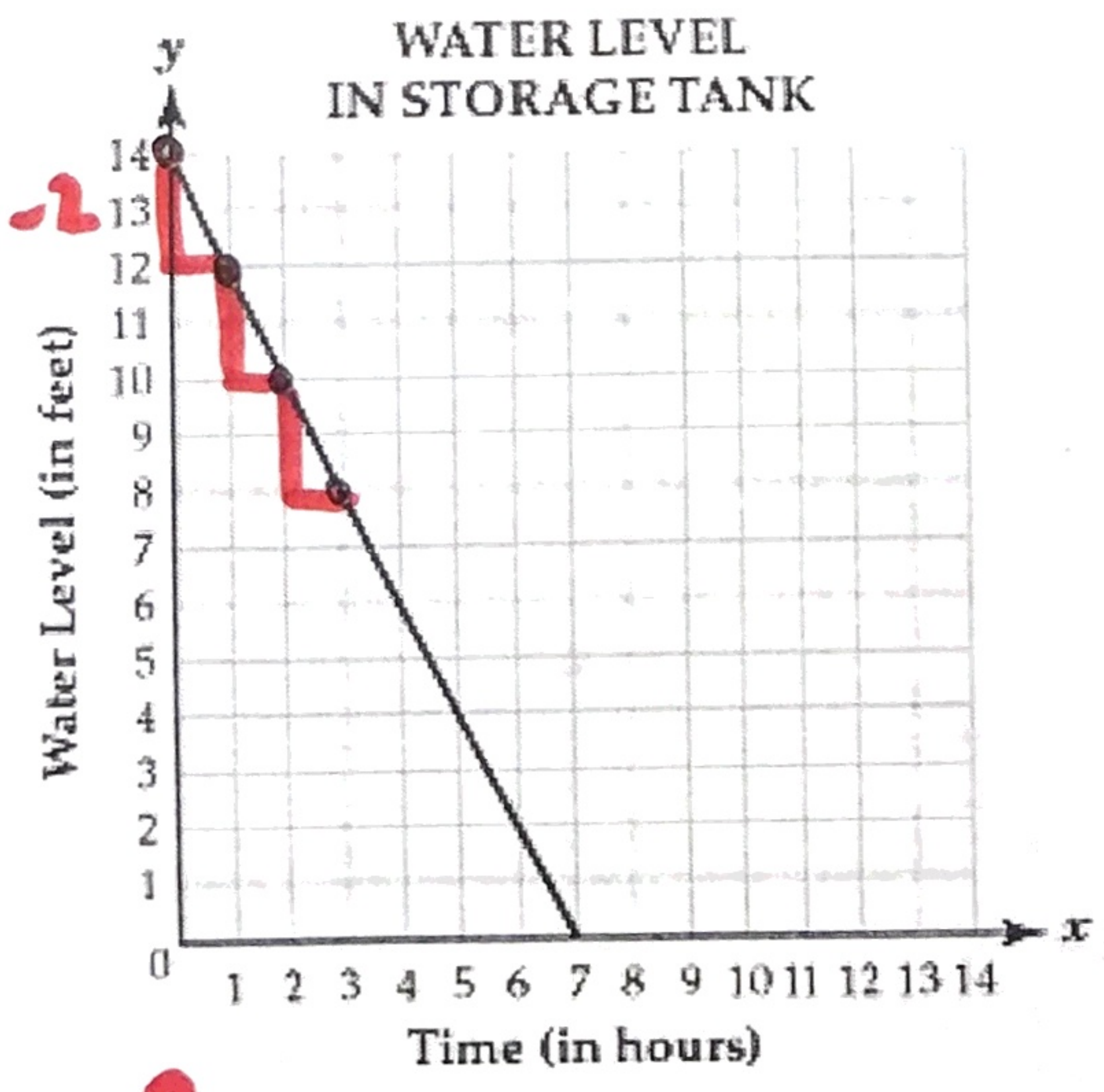
2. Put them in order from slowest to fastest. Explain two strategies you could use.

S M G
Slow Fast

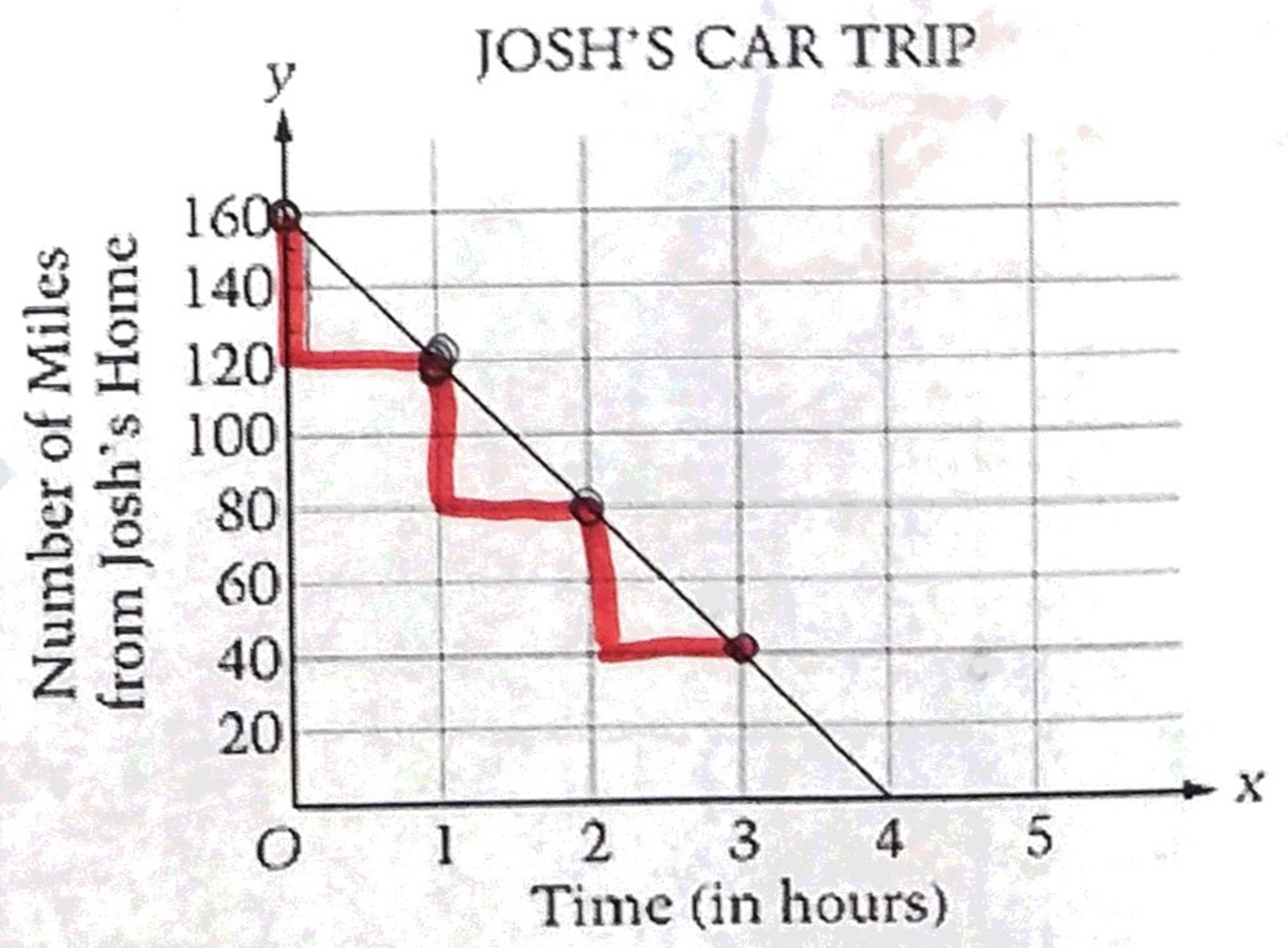
① steepness: horizontal = slow
vertical = fast
② order the #'s from least to greatest (absolute value)

When we find slope (a rate of change) on a graph, it is conventional to leave it as the ratio (fraction) because it is easier to graph whole number rises and runs (and not all independent and dependent variables come in decimals...ie. can you have 0.7 people per room?).

Find the find the slope of each graph. Explain what the rate means



$m = -\frac{2}{1}$ This means... water leaks out 2ft every 1 hour.
 $m = -2$



$m = -\frac{40}{1}$ This means... distance is decreasing 40 miles every hour.
 $m = -40$

B. Not all graphs have labels on the x and y axis, but you can still find the slope. Give the rate of change for each graph below.

