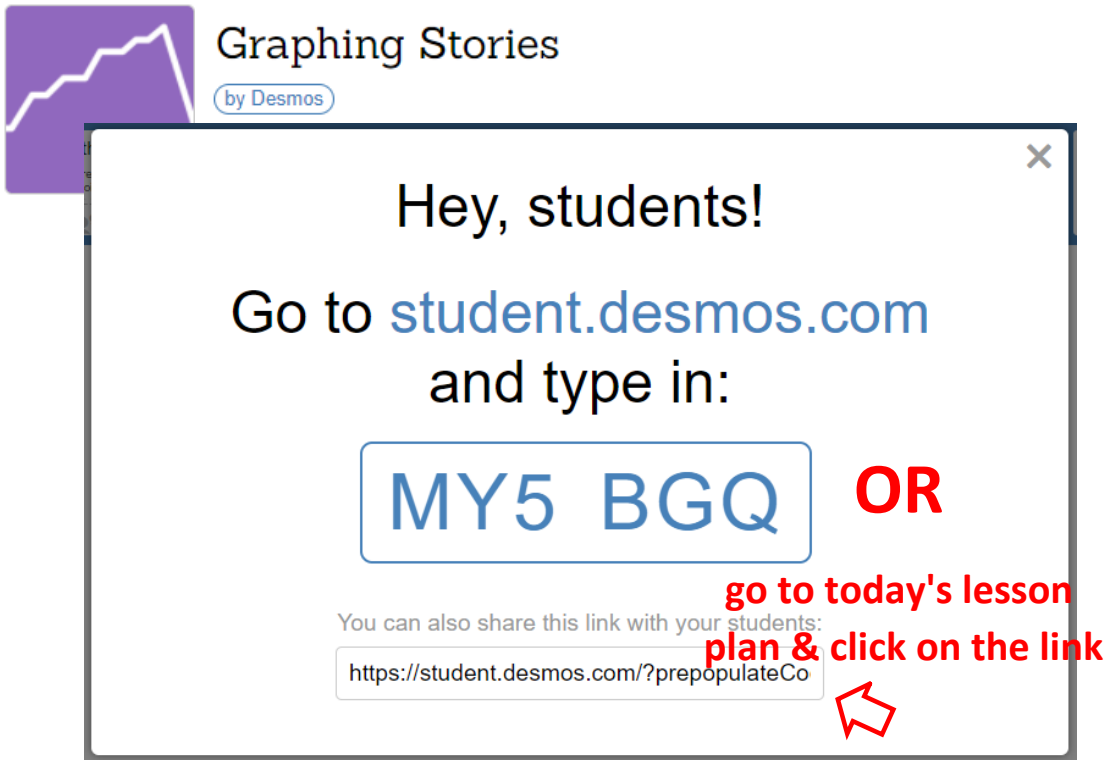


Mar 26-11:47 AM

MPM 1DI

Grade 9 Academic Math

Day 54: Distance-time Graphs

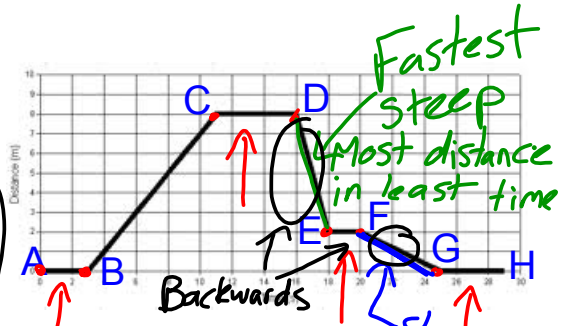
Learning Goal:

Students can 1) read and interpret distance-me graphs, 2) explain how a distance-me graph shows an object's distance from a fixed point and 3) describe how the lines on a distance-me graph are related to distance and speed.

Mar 30-9:29 AM

EX. 1. State which phase(s) best describes each segment of this distance-me graph. Jusfy your answer.

a) no movement
b) fastest movement
c) slowest movement
d) backward movement



• least distance in most time
• Not steed

No movement
• Distance doesn't change

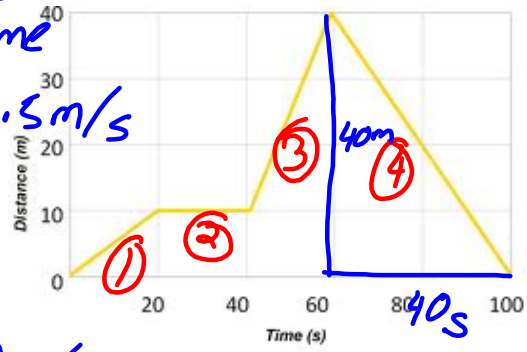
D-E & FG
• Negative slope
• Distance is decreasing so you are moving back

Apr 2-9:52 PM

EX. 2. Describe the moon shown in the graph. In a few sentences, describe a situaon that could be represented by the graph.

Describe

speed = $\frac{\text{distance}}{\text{time}}$



① For 20s they move 10m away $\frac{10}{20} = 0.5\,m/s$

② For 20s they stop — speed = 0 m/s

③ Over 20s they move 30m away $\frac{30m}{20s} = 1.5\,m/s$

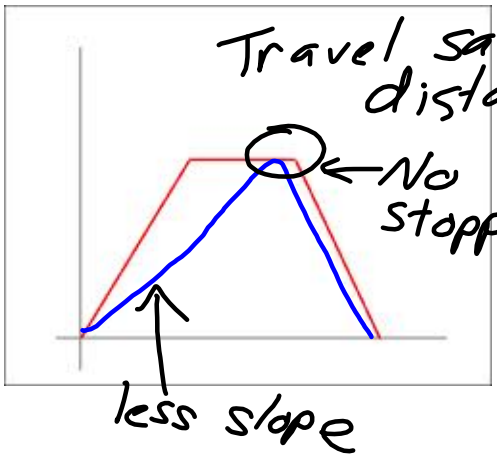
④ They move towards over 40s returning to the start $\frac{-40}{40} = -1\,m/s$

Apr 2-9:55 PM

EX. 3. Draw a graph that isdifferent from the one shown in the following ways:

a) They walk away fromthe CBR at a much slower rate.

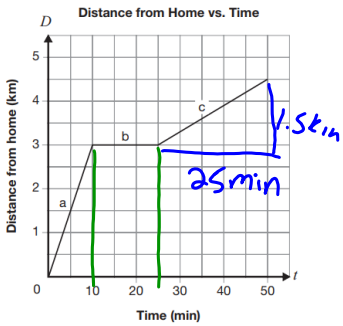
b) They do not stay sll but turn around immediately and head back at a consistent rate/speed.



Apr 2-9:58 PM

EX. 4. The following graph represents the relaonship between Kenny's distance from home on a bike ride and me.

Describe the 3 segments of Kenny's ride. Include informaon about distance travelled, me, direcon and speech, in km/min, for each segment, by compleng the table below.



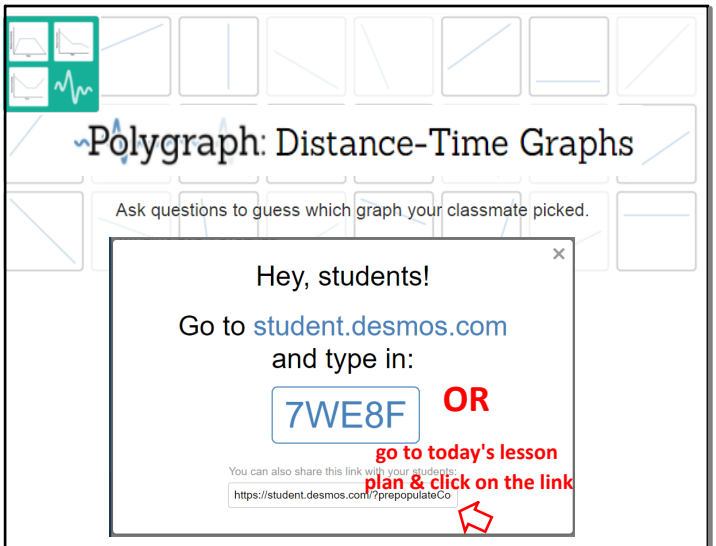
Segment	Distance travelled	Time	Direction	Speed (km/min)
a	3km	10min	Away	$\frac{3\text{ km}}{10\text{min}}$
b	0	15min	Neither, stopped	0 km/n 0 km/min
c	1.5km	25min	Away	$\frac{1.5}{25}\ \frac{\text{km}}{\text{min}} =$

Mar 26-10:52 AM

SUMMARY:

- Distance-me graphs show an object's distance from a fixed point over me
- The steeper the line, the faster the rate of change (speed).
- A line going up indicates moving away from thefixed point and a line going down indicates moving towards the fixed point.

Apr 2-10:00 PM



INSTRUCTIONS:

This acvity is similar to the game "Guess Who" but with graphs.

1. Go to student.desmos.com
2. Enter the class code
3. Create a username that is recognizable.
4. Complete the first acvity individually.
5. For all subsequent acvies, you will be matched up with a partner. You do not need to change seats in order to do this.
6. Answer the quesons between each acvity.

Mar 26-11:57 AM

Practice: pg. 91-93 # 1-3, 5abcd, 7

Apr 2-10:02 PM