

March 25, 2011

5 days and counting!

Class starts in

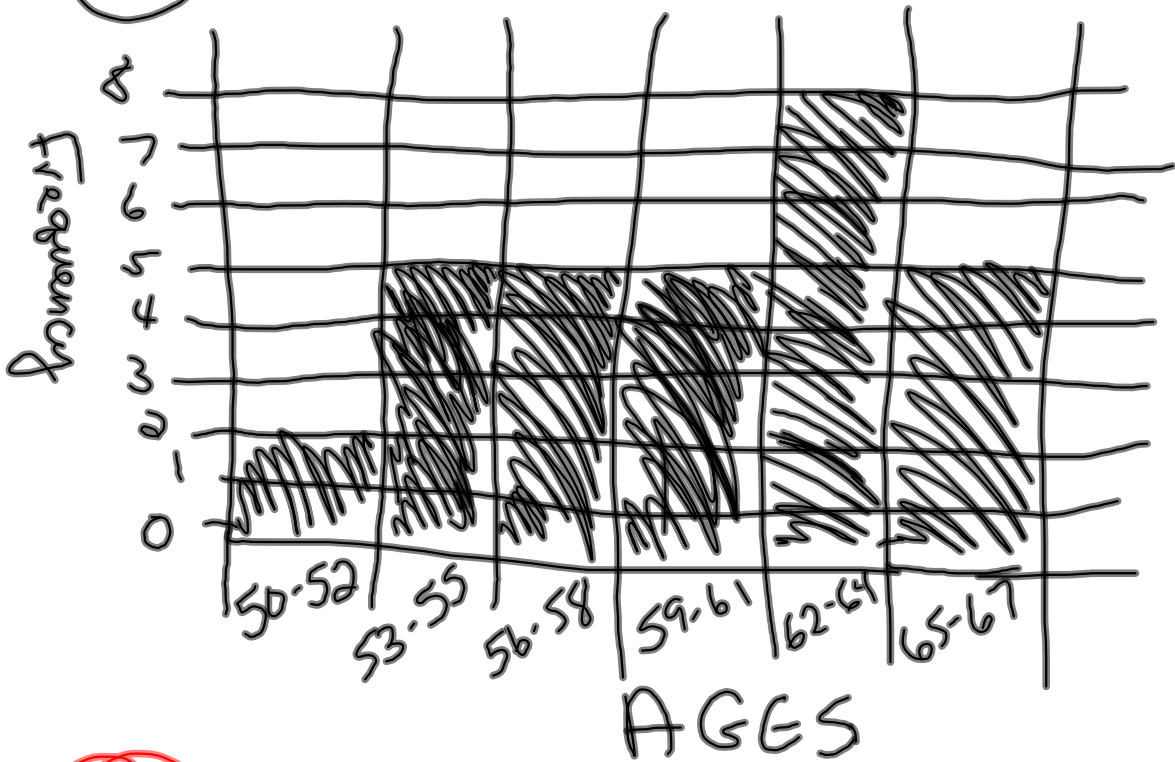
Today's Agenda ~
MCA corrections
Homework corrections
Mark notebooks
8.2.2



Please be ready.

Homework: Turn in notebooks

9 Retirement ages of Detectives

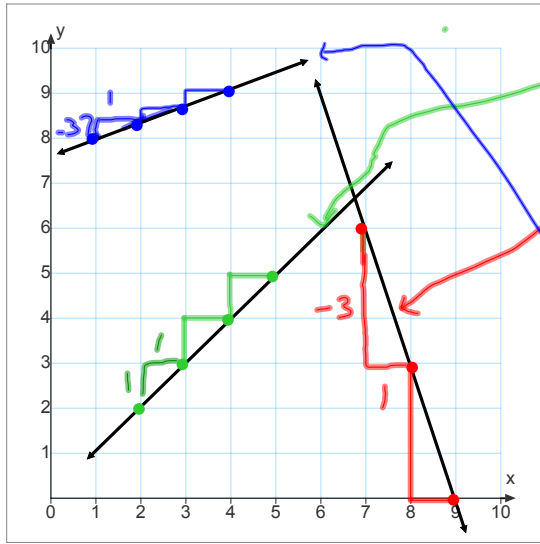


8

tags
total

$$\frac{80}{?} = \frac{3}{120}$$

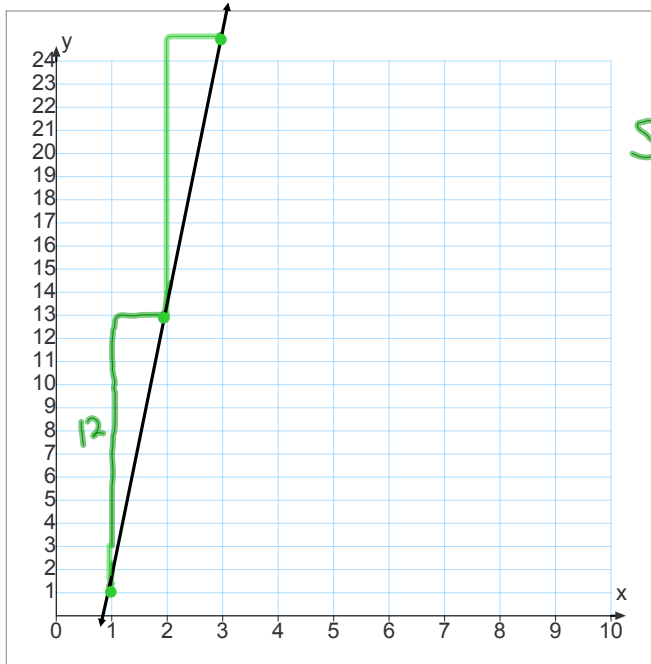
$$\frac{80 \times 120}{3} = 3200$$



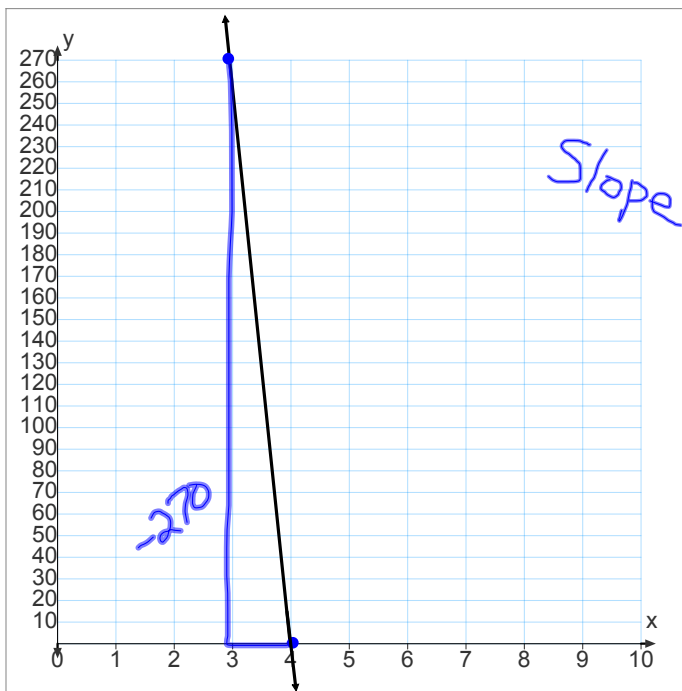
21) Slope = $\frac{1}{1}$

23) Slope = $\frac{-3}{1}$

24) Slope = $\frac{37}{1}$

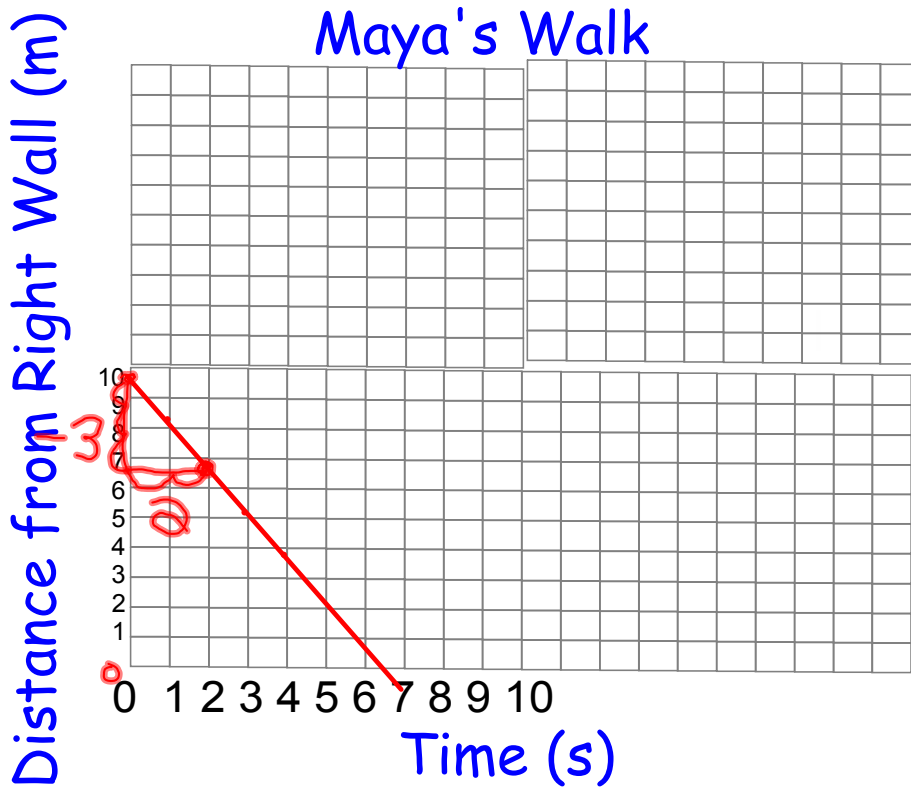


22) Slope = $\frac{12}{1}$



Slope = $\frac{-270}{1}$

3. Use the data in Exercise 2 to draw a graph that shows the relationship between Maya's distance from the right wall and time.



4. What is the slope of the line that you drew?

$$-\frac{3}{2} = -1.5$$

5. Use your graph to estimate when Maya would reach the right wall.

$$6.5 \text{ sec}$$

6. Explain how you can find the distance from the right wall if you know the time.
7. Write a symbolic rule that relates d to t .

$$d = 10 - 1.5t$$

Think & Discuss

Bianca and Lorenzo solved an equation on a quiz. Bianca wrote the rule $d = -2t + 20$. Lorenzo wrote the rule $d = 20 - 2t$. Can they both be right? Explain your thinking.

- Create a problem that can be described by one or both of these rules.

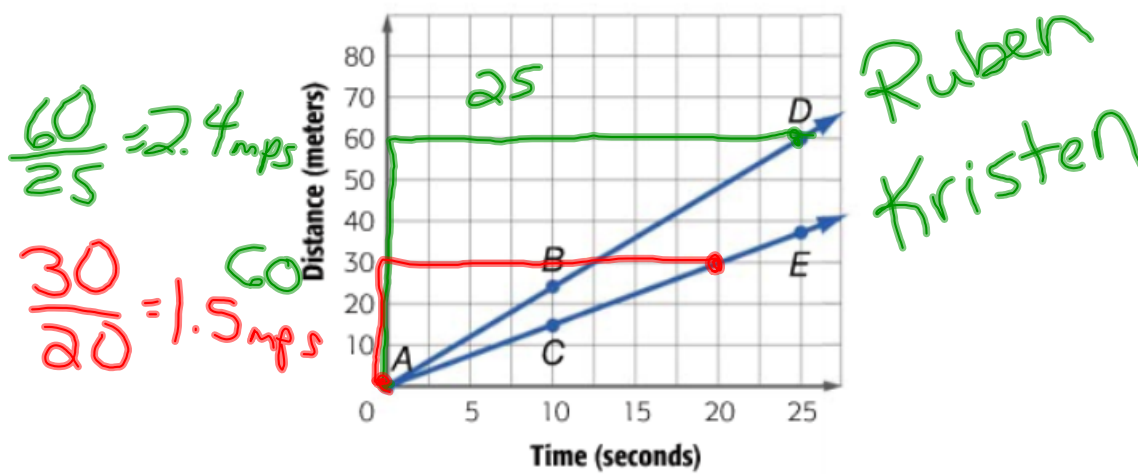
$$d = 20 - 2t$$

$$d = -2t + 20$$

Develop & Understand: B

Ruben and Kristen started walking away from a fence at the same time. Ruben walked at a brisk pace, and Kristen walked at a slow pace. They each measured the distance they had walked in 10 seconds. From this, they estimated how far from the fence they would have been at various times if they had continued walking. They drew distance-time graphs from their data.

Ruben's and Kristen's Walks



8. Which graph represents Ruben's walk, and which represents Kristen's? Explain how you know.

9. What events in the story above match points A, B, and C?

A They are just starting.

B Ruben has walked 25m in 10sec.

C Kristen has walked 15m in 10sec.

10. What do points D and E tell you about the positions of Ruben and Kristen?

D Ruben est. he will walk 60m in 25sec.

E Kristen est. she will walk about 38m in 10sec.

11. Use the graphs to estimate each person's walking speed in meters per second. Give your answers to the nearest tenth.

$$K = \frac{30}{20} = 1.5 \text{ mps}$$

$$R = \frac{60}{25} = 2.4 \text{ mps}$$

12. Which line has the greater slope, Ruben's or Kristen's?

Explain why.

R - he's faster

13. What are the slopes of the two lines? How are they related to Ruben's and Kristen's speeds?

Ruben's Slope =

2.4
1.5

Kristen's Slope =

Relationship:

vimi

Speed is the same as Slope!

Share & Summarize

1. How are the graphs in Exercises 8–13 different from the graphs in Exercises 1–7?



2. How is the rule in Exercises 1–7 different from the rules in Exercises 8–13? How are they the same?



3. Explain how the differences in the rules relate to the differences in the graphs.

Investigation 3 Describe Graphs

GOAL

Vocabulary

- speed
- velocity

Some rates vary. For example, if you count your pulse for one minute and then count it for another minute, you will probably get different results. It is normal for pulse rates to fluctuate, or change.

At least for a while, you would expect other rates to be fixed, or stay the same. For example, if your employer said your pay rate was \$7 per hour, you would expect to earn that for each hour you work.

In this investigation, you will inspect the graphs below to find the directions, speeds, and relative locations of a group of cars along a particular highway.

Homework is on pages 402 - 409