March 22, 2011

8 days and counting!

Class starts in

Please be ready.

Today's Agenda ~
MCA ??'s / Homework
8.2.2

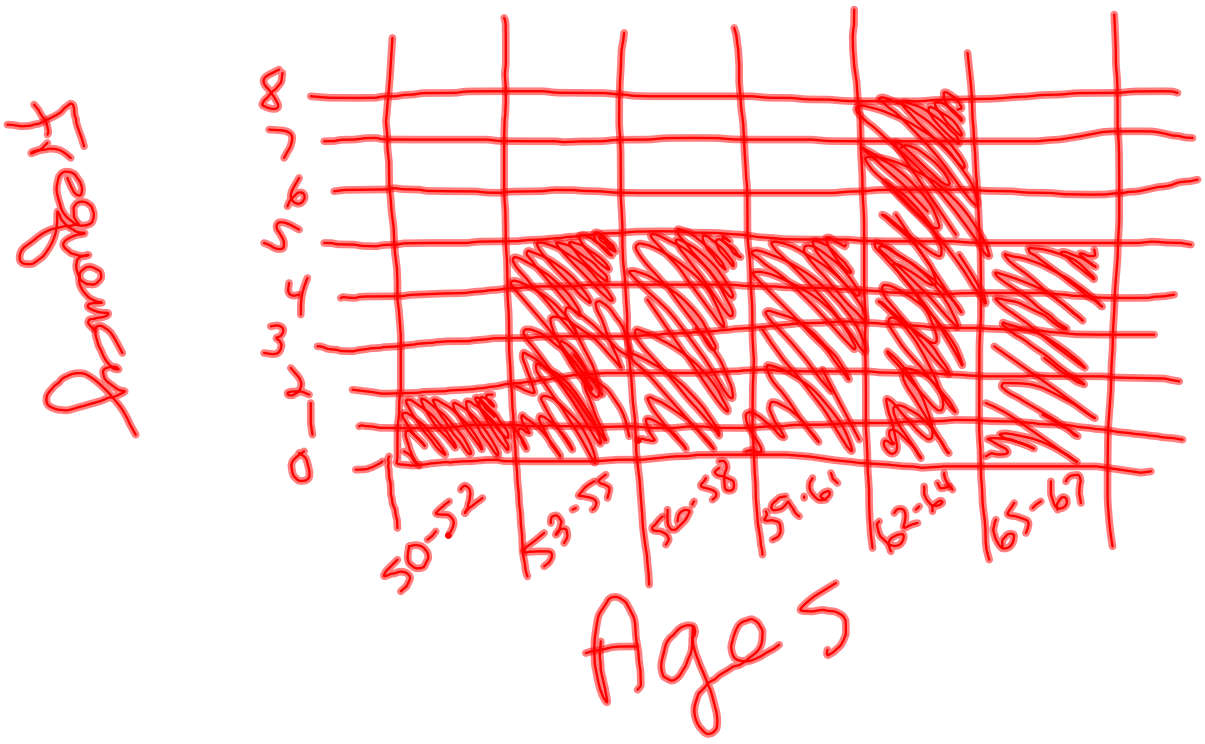
Homework: p. 407 (21-25)

MCA ??'s

We've done 3, 11.

9

Retirement Ages of Detectives



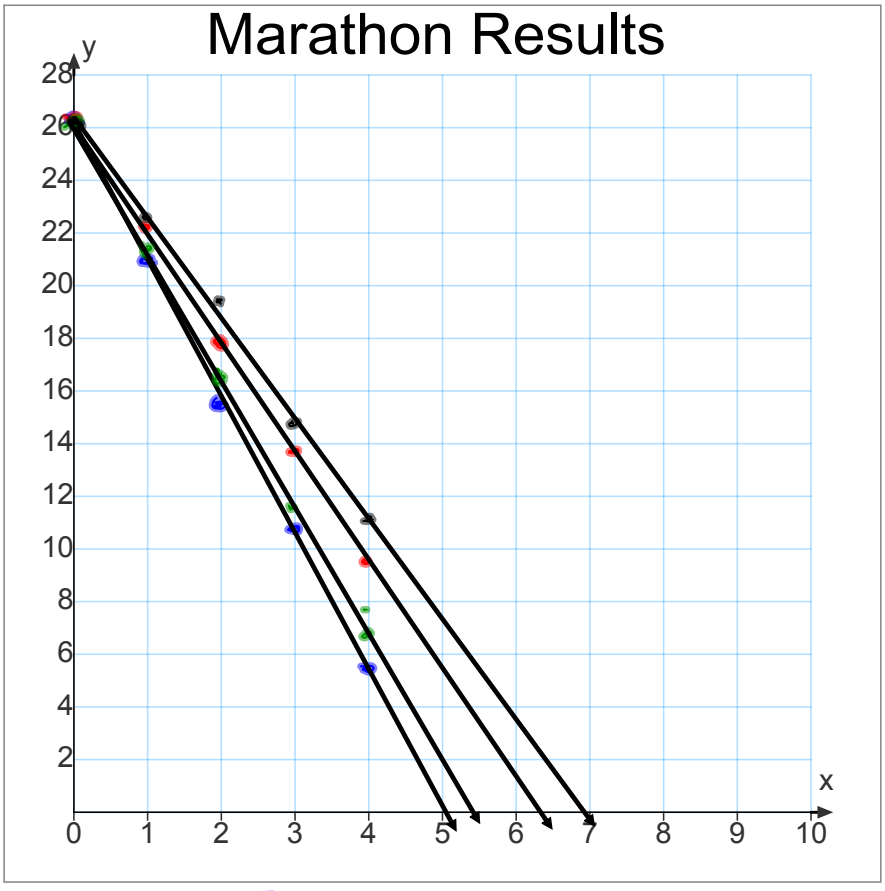
p. 402-9(4)

4a)

Marathon Results

Time (hours), t	0	1	2	3	4
Nadia's Distance from Finish, N	26.2	21	15.8	10.6	5.4
Helenas Distance from Finish, H	26.2	22.1	18	13.9	9.8
Bryson's Distance from Finish, B	26.2	21.35	16.5	11.65	6.8
Mark's Distance from Finish, M	26.2	22.4	18.6	14.8	11

4b)



c) Similar → all downhill, all linear
diff → different slopes

Slopes

Nadia = -5.2

Helena = -4.1

Bryson = -4.85

Mark = -3.8

d) Time to finish?

Nadia = about 5 hours

Helena = about 6 hours

Bryson = about 5 1/2 hrs

Mark = about 7 hours

e) Equations

Nadia → N=26.2-5.2h

Helena → H=26.2-4.1h

Bryson → B=26.2-4.85h

Mark → M=26.2-3.8h

Period 1

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.

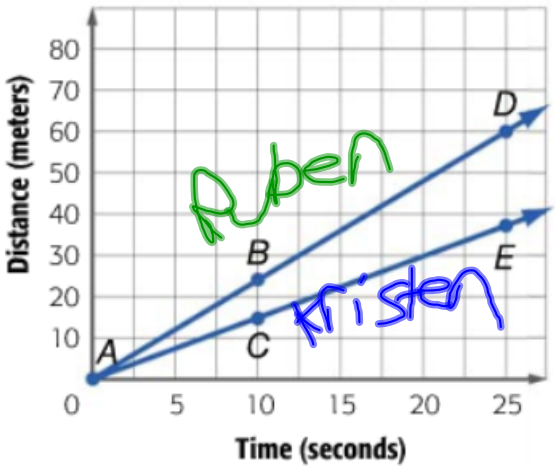
$d = -2t + 20$

$d = -2t + 20$

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.

Homework is on pages 402 - 409

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

A Just getting started

B Ruben has walked 25m in 10sec.

C Kristen has walked 15m in 10 seconds

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

D Ruben would have walked 40m in 25sec.

E 40m in 25 sec.

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

Ruben

25/10=2.5 m per sec.

Kristen

15/10=1.5

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

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

Ruben's Slope = 2.5 m per sec

Kristen's Slope = 1.5

Relationship: Slope and speed are the same

Homework is on pages 402 - 409

Share & Summarize

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

1-7 ↘ 8-13

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.

Homework is on pages 402 - 409

Investigation 3 Describe Graphs

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.