March 22, 2011

8 days and counting!

Class starts in

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

Please be ready.

Homework: p. **407 (21-25)**

MCA ??'s

We've done 2, 5.

8

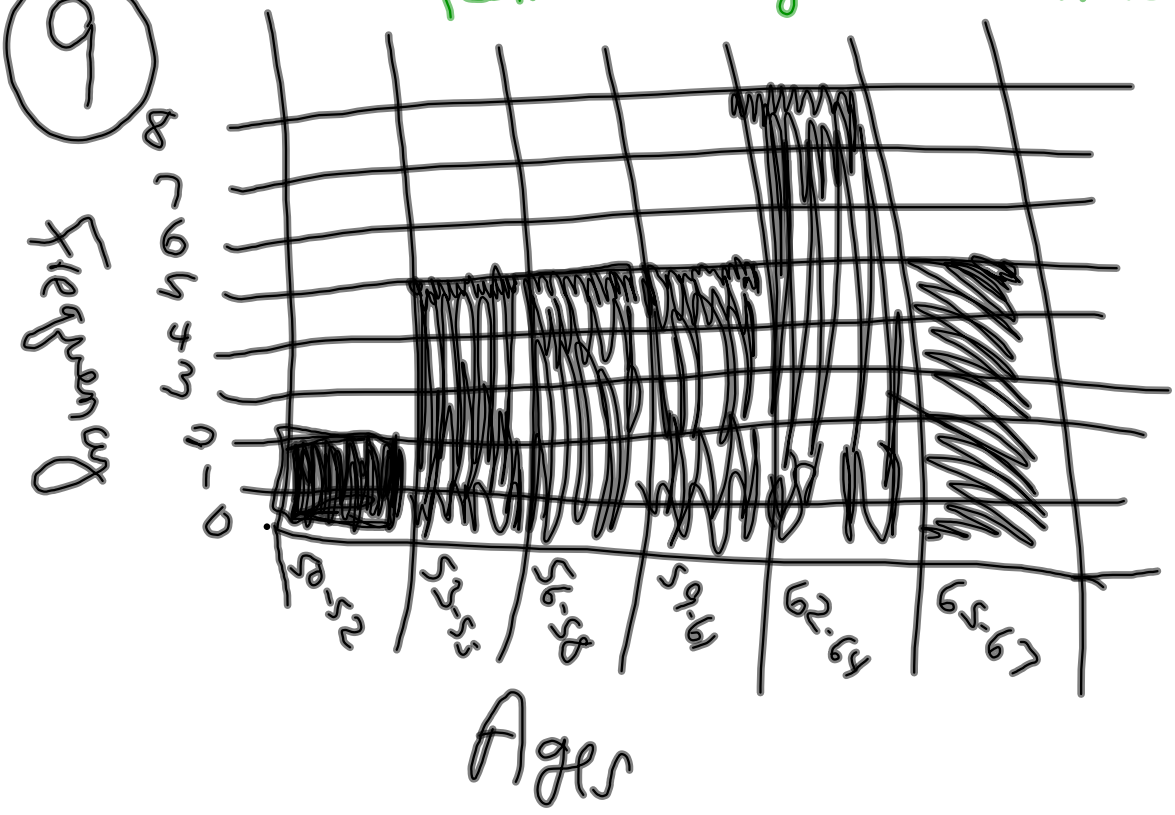
$$\frac{80}{?} = \frac{3}{120}$$

← tags
← total

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

9

Retirement Ages of Detectives



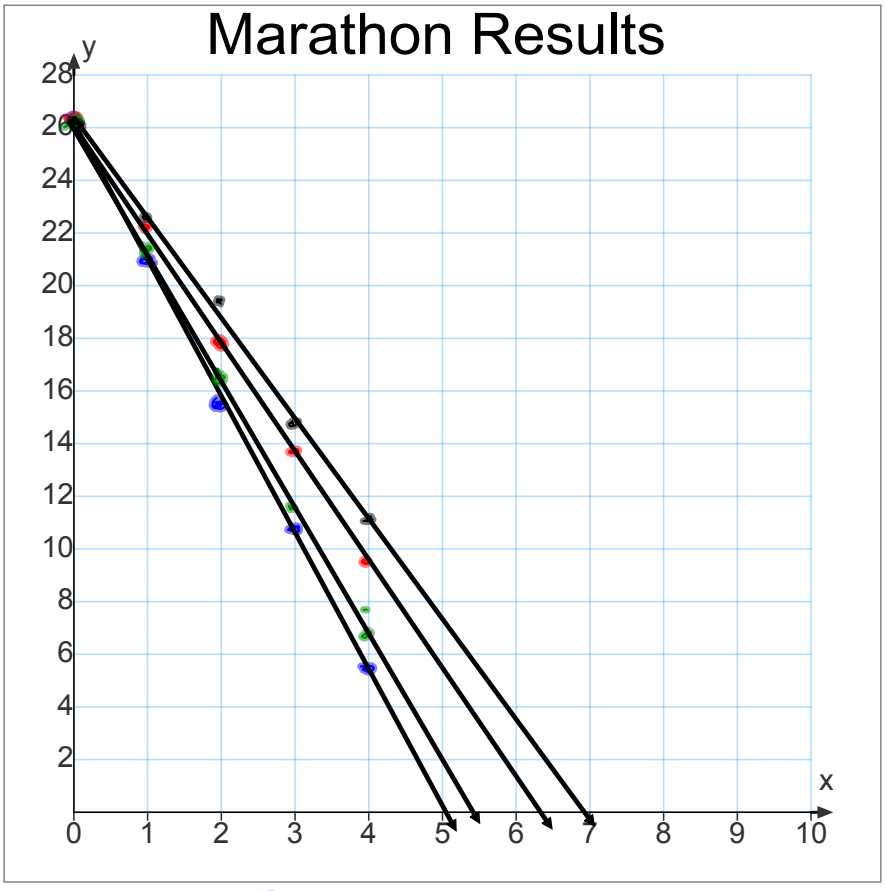
p. 402-9(4)

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

Investigation 2 Distance and Time

An airplane flies from New York to Los Angeles. There are two distances that are changing, the distance between the airplane and the New York airport and the distance between the airplane and the Los Angeles airport.

Think & Discuss

Which of the two distances described above is decreasing over time?

Think of other situations in which distance decreases over time.

Develop & Understand: A

On pages 390 and 391, Zach and Maya were walking from the left wall of a room to the right wall. You figured out how far each person was from the left wall at different points in time. Suppose instead you want to know how far the person is from the *right* wall at each point in time.

1. Is the person closest to the right wall at the beginning of the walk or at the end of the walk?

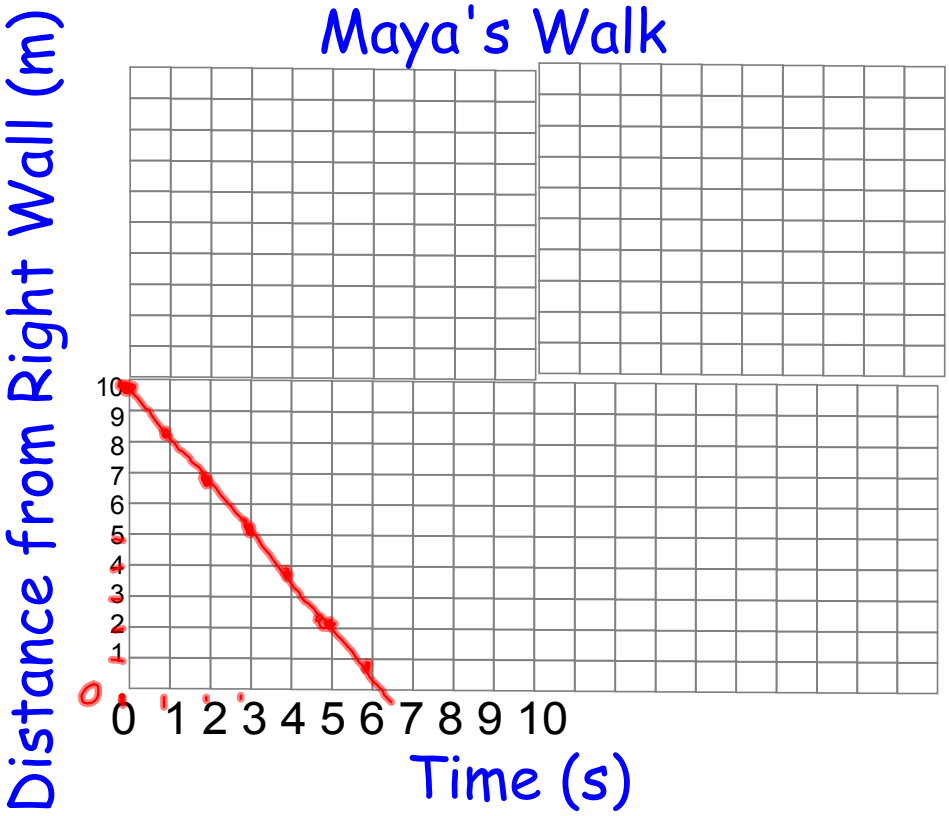
2. Suppose Maya walks at 1.5 meters per second across a room that is 10 meters wide. Copy and complete this table.

Maya's Walk

Time (seconds), *t*	0	1	2	3	4
Distance from Right Wall (meters), *d*	10	8.5	7	5.5	4

Homework is on pages 402 - 409

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?

-1.5

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

$\approx$ 6.5sec

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.

$d = 10 - 1.5t$

Homework is on pages 402 - 409

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.

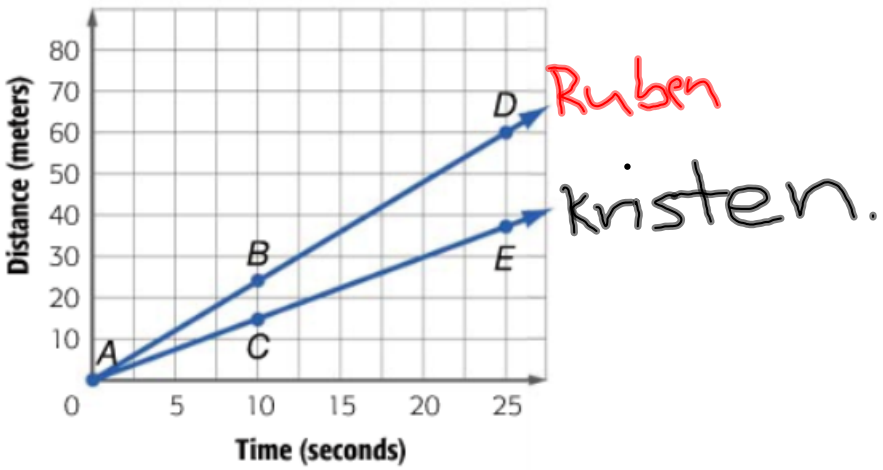
$d = -2t + 20$

$d = 20 - 2t$

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 They are just getting started.

B Ruben has walked 25m in 10sec.

C

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

D Ruben would walk 60m in 25sec.

E

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

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 = _____

Kristen's Slope = _____

Relationship:

Homework is on pages 402 - 409

GOAL