Rate of Change/Slope/ Y-Intercept

Graph Interpretation

1. Jen and Brian are competing in a hot dog eating contest. The graph below shows their progress over time.
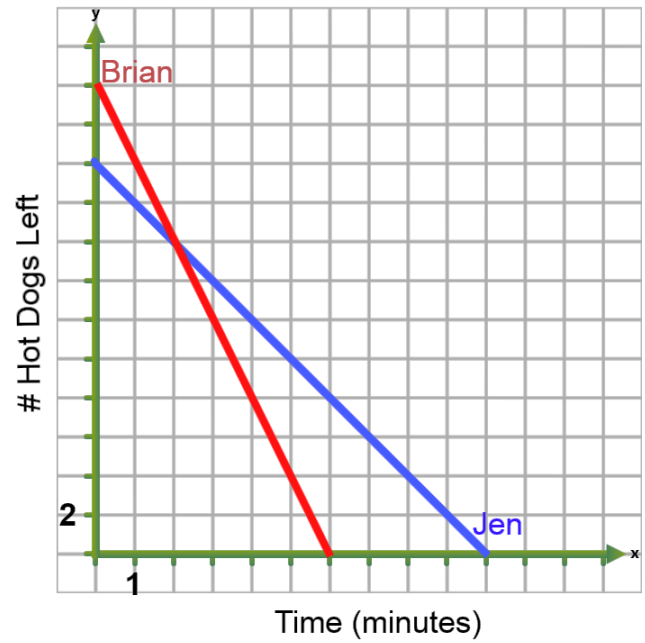
a) How many hot dogs did Brian start with?
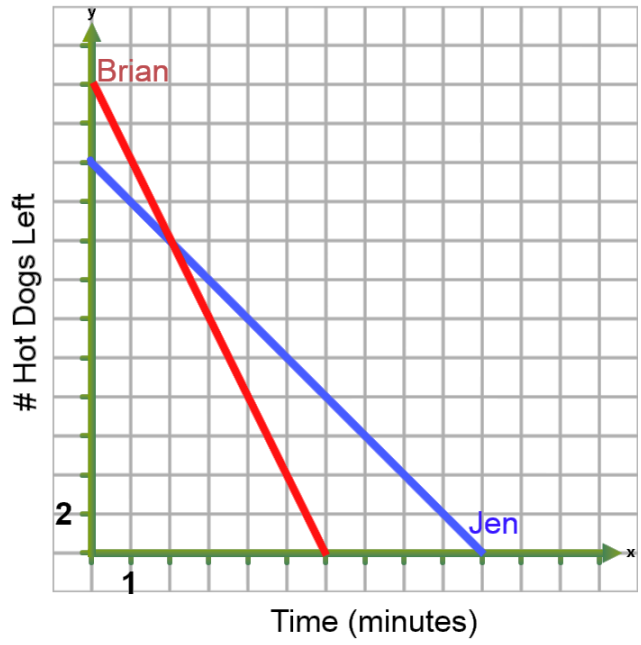
b) After 5 minutes how many hot dogs does he have left?

c) How long does it take Brian to finish eating all of his hot dogs?
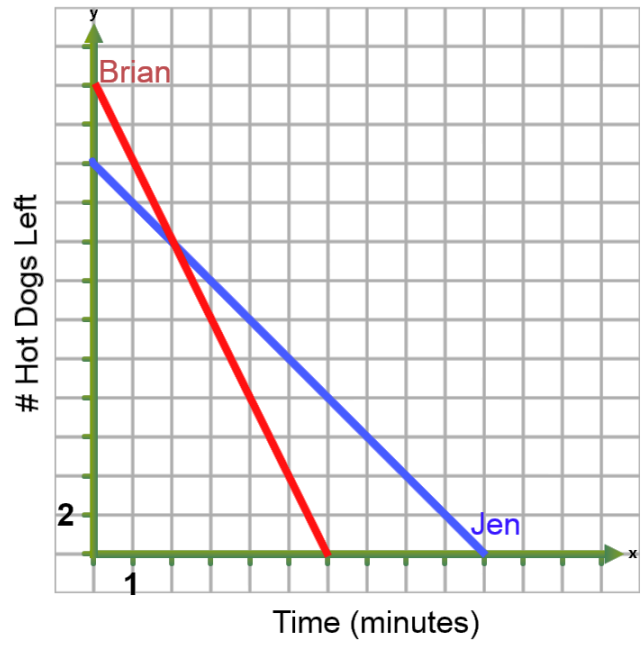

d) Find the rate (slope) at which Brian is eating his hot dogs.

e) How many hot dogs did Jen start with?

f) After 5 minutes how many hot dogs does she have left?

g) How long does it take Jen to finish eating all of her hot dogs?

h) Find the rate (slope) at which Jen is eating her hot dogs?

i) Who is eating hot dogs faster? How do you know?

j) How many minutes into the race do they have

the same number of hot dogs left?

Hot Dogs Left

Brian

Jen

2

1

Time (minutes)

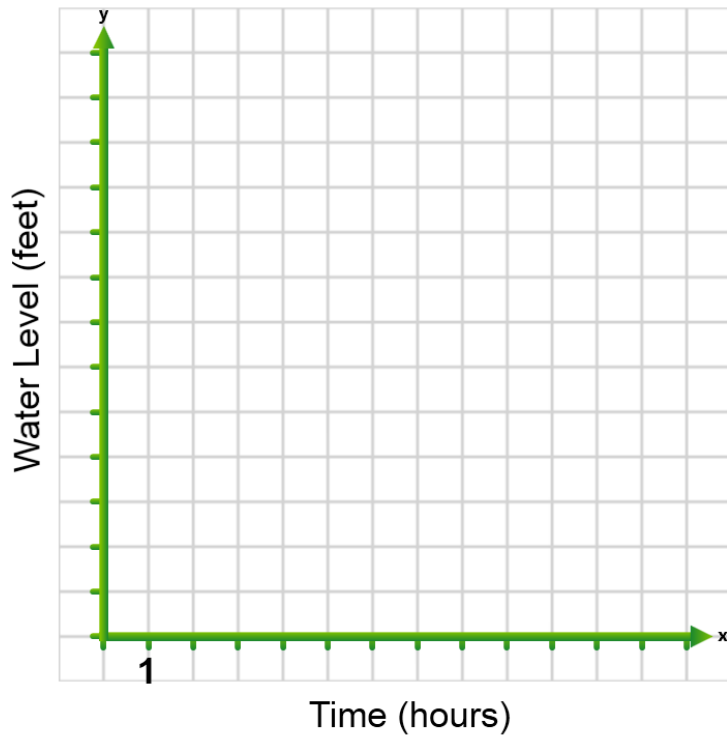k) Do either Jen or Brian get tired and slow down during the contest?

2. Kathy and Matt and draining their swimming pools at the end of the summer. Kathy's pool is 10 feet deep and Matt's pool is 5 feet deep. Kathy drains her pool at a rate of 2 feet per hour and Matt drains his pool at a rate of 0.5 feet per hour.

a) Complete the tables provided.

Hours	0	1	2	3	4	5
Kathy's Water Level						

Hours	0	2	4	6	8	10
Matt's Water Level						

b) Graph and label two lines to show both Kathy and Matt's water levels.

Water Level (feet)

1

Time (hours)

c) Whose pool is emptying faster? How do you know?

d) When will the two pools have the same amount of water?

e) When will Kathy's pool be empty?
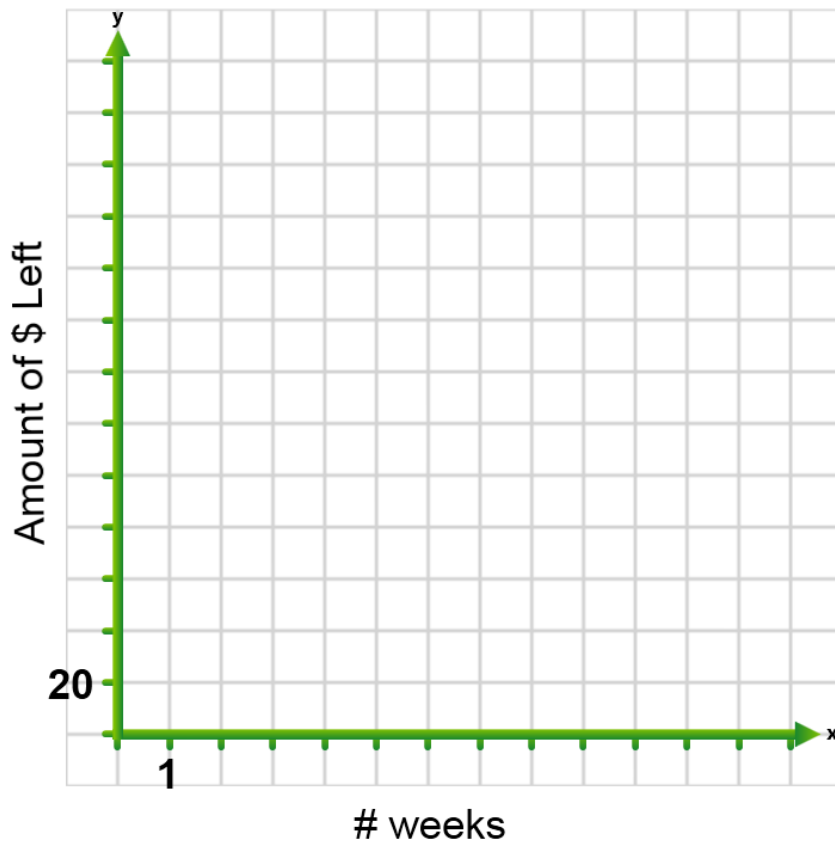
f) When will Matt's pool be empty?

3. You and your brother both having savings accounts with money. Your account has $240 dollars and your brother's account has $160. You spend $40 per week and your brother spends $20 per week.

a) Complete the tables provided.

# of weeks	Your $ left	Your Bro's $ Left
0		
2		
4		
6		
8		

b) Graph and label two lines to show both your money and your brother's money left in the savings account.

Amount of $ Left

20

1

weeks

c) Write a rule to represent the amount of money you have left.

d) Write a rule to represent the amount of money your brother has left.

e) After two weeks have passed, how much money do you each have?

f) After how many weeks do you have the same amount of money left? How much money do you each have?

g) Who runs out of money first? When does this person run out of money?