ANALYZING REAL WORLD GRAPHS

Monday Madness: If you dressed up, please keep your packet out.

Agenda

Warm Up
Practice
Notes
Homework

Don't forget:

- **Quiz tmr!!**
- **Extra Credit due Friday**
- **The six weeks ends 11/6**

WARM-UP MONDAY

1. The cost to send a Skype call is $0.07 per minute with a connection fee of $0.50. Which is the independent variable? → change

A. Total cost of the call. ?
B. Cost per minute. doesn't change
C. The connection fee. doesn't change
D. Number of minutes. ?

2. A function is given by the equation below. Name the dependent variable.

y

$g(t) = -8t^2 + 45$

A. g(t) = f(x) = y
B. -8
C. t
D. 45

EVALUATING PRACTICE

Directions: Cut the 12 linking cards along the dark borders. Shuffle the cards. Start with any card. Evaluate the function at the given value of x. Find the number which represents the solution. Evaluat the new function using the given value of x. Continue linking until the solution to the last card is the number on the first card you started with.

Evaluating Functions Linking Cards

1	$f(x)=5x^2-10$ $f(-2)$	10	$f(x)=-3x+2$ $f(-2)$	8	$f(x)=x-6$ $f(-2)$
-8	$g(x)=-3x$ $g(-2)$	6	$g(x)=4x-1$ $g(-2)$	-9	$g(x)=x^2+9$ $g(-2)$
13	$h(x)=-x-7$ $h(-2)$	-5	$h(x)=3x+2$ $h(-2)$	-4	$h(x)=x+1$ $h(-2)$
-1	$f(x)=-1-4x$ $f(-2)$	7	$g(x)=-x^2+4$ $g(-2)$	0	$h(x)=\frac{x+4}{2}$ $h(-2)$

Write down the question and then your work. This is due by the end of class tomorrow (you can work on it after your quiz)

TEKS Check Averages

2nd - 52.4%

3rd - 59.1%

4th - 58.9%

5th - 58.5%

Corrections

You can pick up TOMORROW. Will be done ONLINE. You must watch the videos FIRST, then come to tutoring with evidence. You will then complete the re-test questions.

DUE BY 4:15PM TUES 11/4

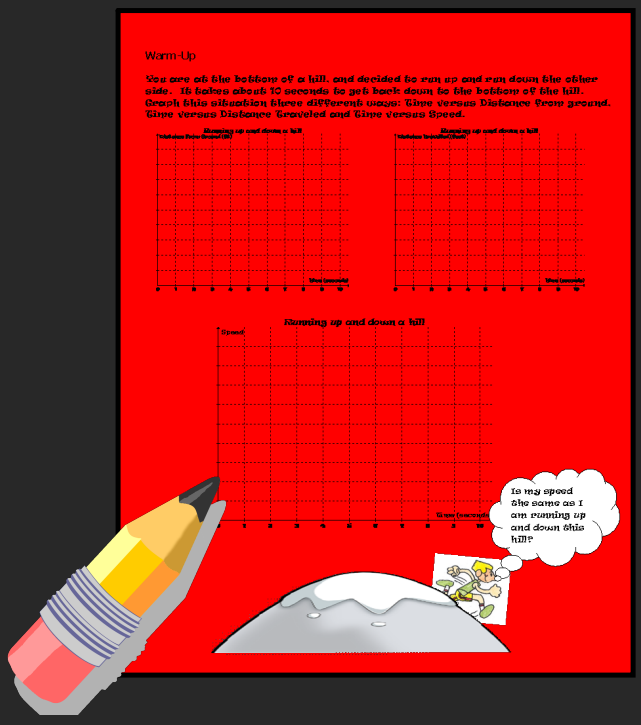
Ms. Korotkow's Tutoring Availability End of 2nd Six Weeks

Monday	Tuesday	Wednesday	Thursday	Friday
27 NO TUTORING	28 8:15-9:00AM 4:30-5:00PM at Starbucks (Coit)	29 8:15-9:00AM 4:15-4:40PM	30 ~~NO TUTORING~~ 8:15-9:00AM	31 8:15-9:00AM Extra Credit due by 1:30PM
3 8:30-9:00AM All late HW due 4:15PM	4 8:15-9:00AM TEKS Check Test Corrections due by 4:15PM	5 8:15-9:00AM	6 NO TUTORING End of 2nd six weeks	

If you cannot make the above listed times, check the purple sheet to find another algebra teacher to get help from. Please note that the deadlines listed above are firm, no work will be accepted after the listed time.

ANALYZING REAL WORLD GRAPHS

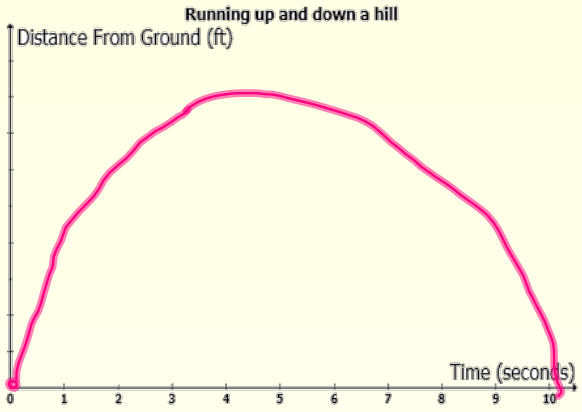
Fold paper in half, glue on blank side onto page 44. You should probably do it in PENCIL.

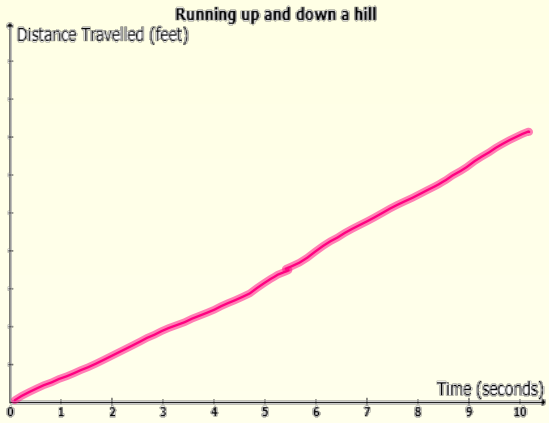


Algebra I - Unit 3: Topic 1 – Analyzing Real-World Graphs NO EQ. p.44

Warm-Up

You are at the bottom of a hill, and decided to run up and run down the other side. It takes about 10 seconds to get back down to the bottom of the hill. Graph this situation three different ways: Time versus Distance from ground, Time versus Distance Traveled and Time versus Speed. *HINT: READ AXIS LABEL*





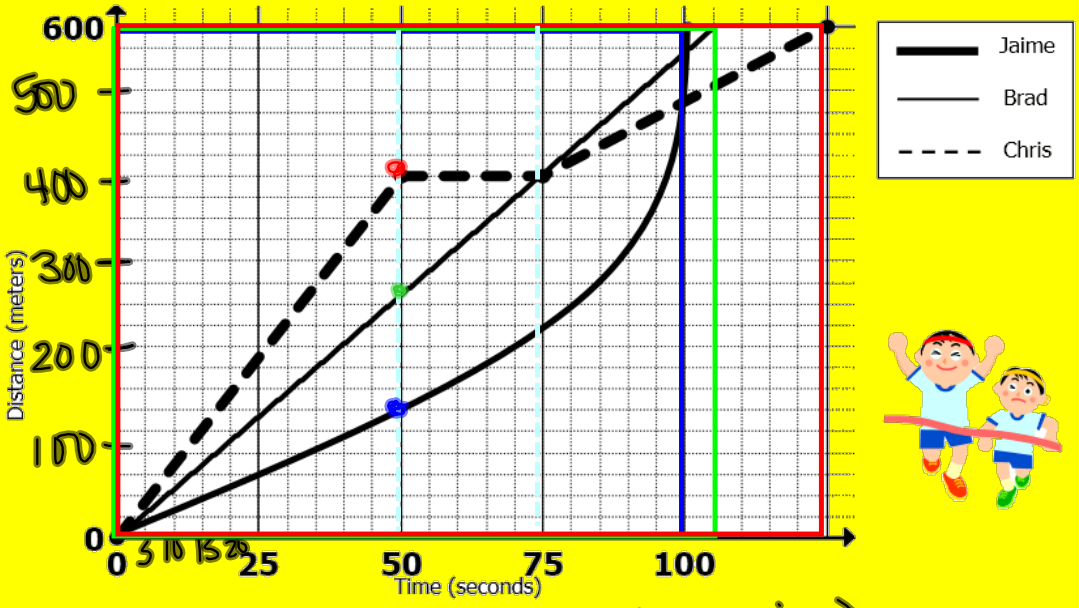
start standing still

Algebra I - Unit 3: Topic 1 – Analyzing Real-World Graphs

Student Notes – Analyzing Real-World Graphs

The 600-Meter Race

The graph below describes what happens when three athletes, Jaime, Brad, and Chris enter a 600-meter race.



1. What is the independent variable? time (x-axis)
2. What is the dependent variable? distance (y-axis)
3. What is the domain and range of each runner? continuous → frame

   Jaime: Domain: $\{x \mid 0 \le x \le 100\}$ Range: $\{y \mid 0 \le y \le 600\}$

   Brad: Domain: $\{x \mid 0 \le x \le 105\}$ Range: $\{y \mid 0 \le y \le 600\}$

   Chris: Domain: $\{x \mid 0 \le x \le 125\}$ Range: $\{y \mid 0 \le y \le 600\}$

4. At the start of the race, who was running the fastest? Chris

   How do you know? line steeper (more distance in less time)

5. At the 50-second mark, estimate how far each athlete had run.

   Jaime - ~150m Brad - ~250m Chris - ~400m

   ~ means "about"

6. At the 75-second mark, estimate how far each athlete had run.

   Jaime - ~250m Brad - ~400m Chris - ~400m

Algebra I - Unit 3: Topic 1 – Analyzing Real-World Graphs

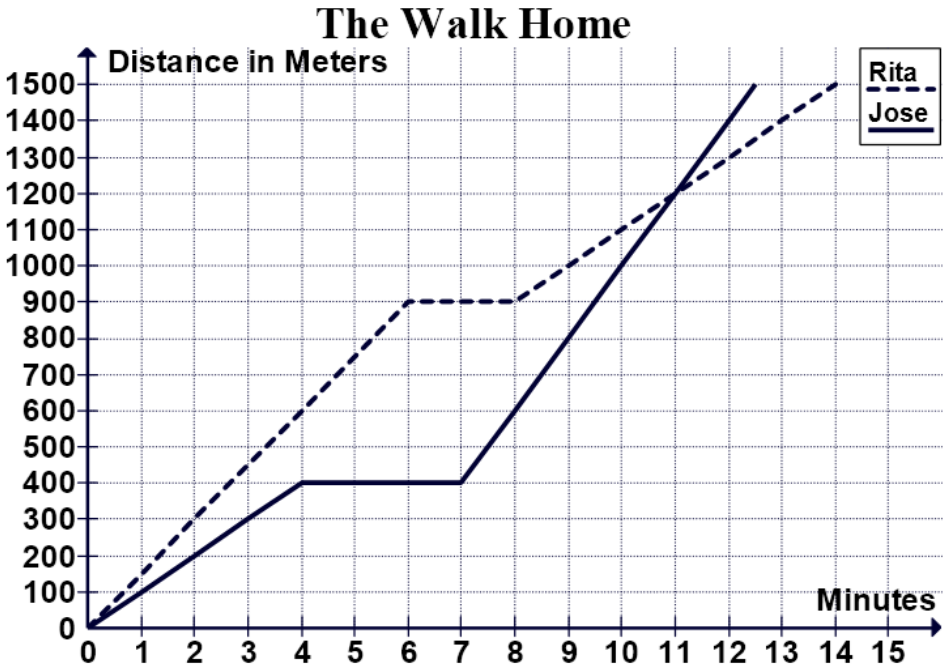
7. Who was winning the race at 25 seconds? Chris
8. Who was winning the race at 80 seconds? Brad
9. Which two runners were tied at 75 seconds? Chris & Brad
10. Which two runners were tied at 98 seconds? Jaime & Chris
11. Which two runners were tied at 99 seconds? Brad & Jaime
12. Who finished the race first? Jaime
13. Who was in second? Brad
14. Who was last? Chris
15. By how many seconds did the winner outrun the second place finisher? 5 sec
16. By how many seconds did the second place finisher outrun the third place finisher? 20 sec
17. If the race had only been 300 meters, who would have won? chris

    How do you know? he reached 300 m first
18. Pretend you are a radio sports commentator calling this race. Write what you would say to describe the race to someone not watching the race.

Algebra I - Unit 3: Topic 1 – Analyzing Real World Graphs

Practice - Analyzing Real-World Graphs **No Textbook Correlation**

Name _____ Date _____ Period _____



The graph above shows the time it took Rita and her brother Jose to walk the 1500 meter distance home. Each student took a different route. Use the graph to answer the questions below.

1. What is the independent variable? _____

2. What is the dependent variable? _____

3. What is the domain and range of each person's graph?

   Rita: Domain: _____ Range: _____

   Jose: Domain: _____ Range: _____

4. In the beginning, who was walking the fastest and would get home quicker?

   _____

   How do you know? _____

5. At the 5 minute mark, estimate how far each person had walked.

   Rita - _____ Jose - _____

6. At the 5 minute mark, ho was getting home faster? _____

   When did that sibling actually get home?_____

Algebra I - Unit 3: Topic 1 – Analyzing Real World Graphs

7. When were the two siblings the same distance from home? _____

8. Who got home first? _____

9. How long did it take him/her? _____

10. How long did it take the other to get home? _____

11. How much longer did it take him/her to get home? _____

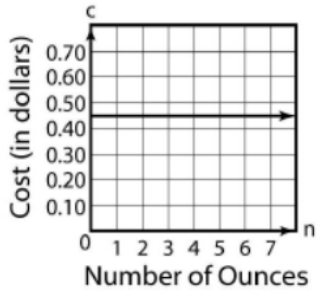
12. If the distance home had only been 400 meters, who would have gotten home first? _____

How do you know? _____

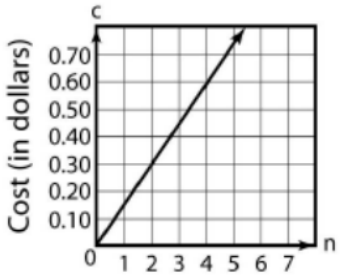
_____

13. At the grocery store, dried beans are on special for $0.45 for 3 ounces. Which of these graphs best represents the relationship between the number of ounces of dried beans and the cost?

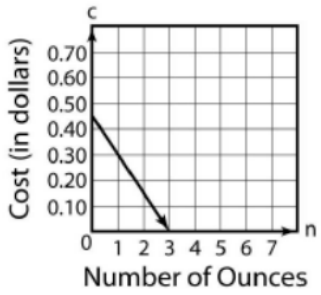
A



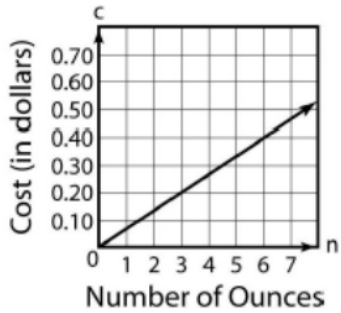
C



B



D



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Homework Check

1. Minutes (Time)
2. Distance (Meters)
3. Rita Domain: $0 \le x \le 14$ Range: $0 \le y \le 1500$
   Jose Domain: $0 \le x \le 12.5$ Range: $0 \le y \le 1500$
4. Rita; the line representing her walk is steeper
5. Rita - 750 m; Jose - 400m
6. Rita; 14 minutes
7. 11 minutes
8. Jose
9. 12.5 minutes
10. 14 minutes
11. 1.5 minutes
12. Rita; she got to the 400m mark first.
13. C

Tomorrow is Tacky Tourist Tuesday!