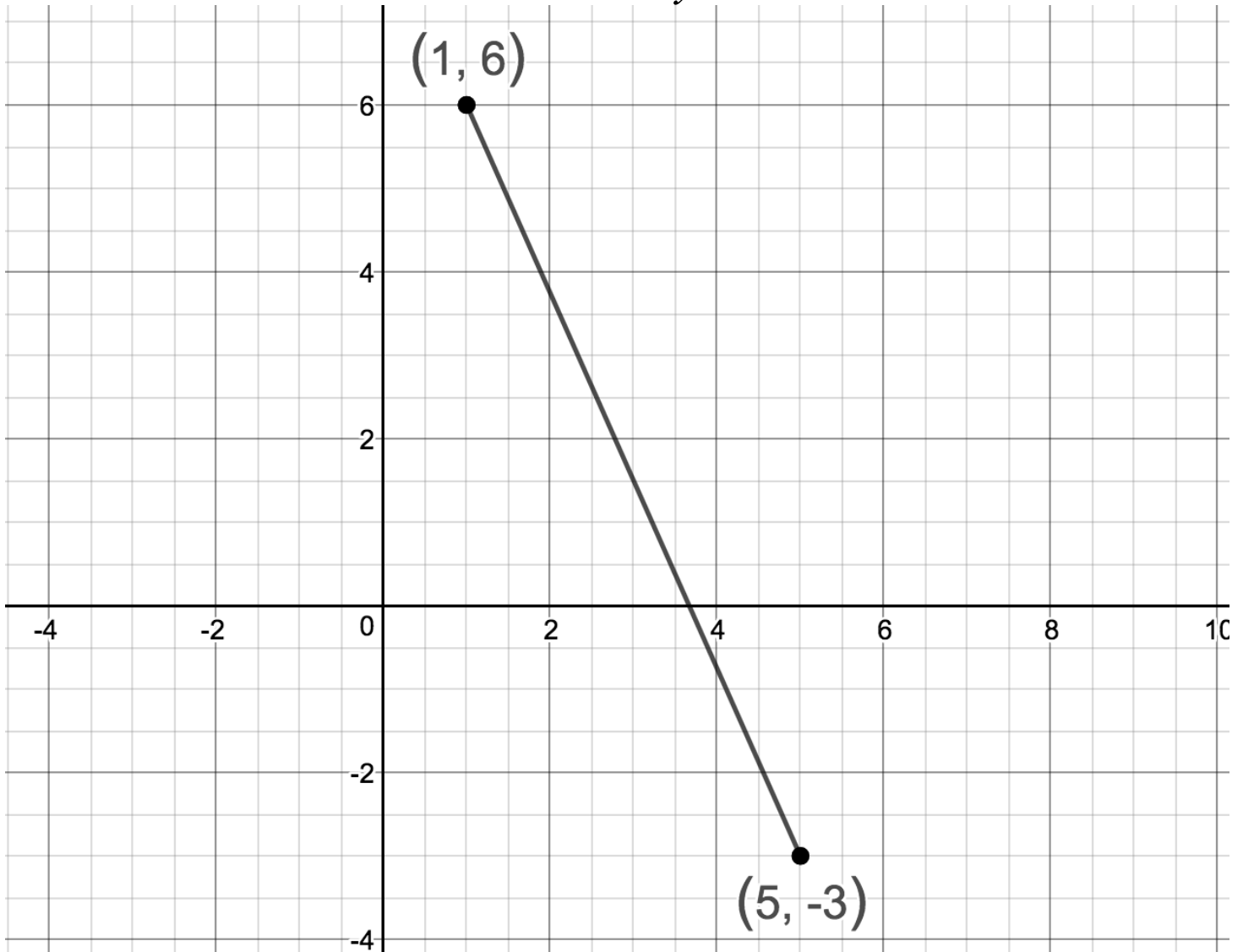


STILL NEED TO PRIORITIZE QUESTIONS AT THE
END

**MAYBE CHANGE MARIA TASK CARD
QUESTIONS TO INCLUDE DOMAIN AND RANGE
IF THOSE ARE DISCUSSED IN ALONZO
DEBRIEF?**

Math 1 Warm Up 1/29/2018

1. Carefully draw this graph on your Warm Up sheet.
2. What is this line's **maximum** y -value?
3. What is this line's **minimum** y -value?



3.2 Floating Down the River

A Solidify Understanding Task



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Alonzo, Maria, and Sierra were floating in inner tubes down a river, enjoying their day. Alonzo noticed that sometimes the water level was higher in some places than in others. Maria noticed there were times they seemed to be moving faster than at other times. Sierra laughed and said “Math is everywhere!” To learn more about the river, Alonzo and Maria collected data throughout the trip.

Alonzo’s Table: Depth vs. Time

Time (in minutes)	0	10	20	30	40	50	60	70	80	90	100	110	120
Depth (in feet)	4	6	8	10	6	5	4	5	7	12	9	6.5	5

What do you **notice**?

What do you **wonder**?

On the back of your notice/wonder sheet, write down all of your group's work from your board.

Task Card: Alonzo's Table

Alonzo's Table: Depth vs. Time

Time (in minutes)	0	10	20	30	40	50	60	70	80	90	100	110	120
Depth (in feet)	4	6	8	10	6	5	4	5	7	12	9	6.5	5

Directions: Use the data collected by Alonzo to interpret the key features of this relationship:

1. **When** is the depth increasing?
2. **When** is the depth decreasing?
3. **How long** was Alonzo measuring the depth for? When did he start measuring? When did he stop measuring?
4. What is the **range** of river depths that Alonzo measured?
5. What is the **minimum** depth of the river?
6. What is the **maximum** depth of the river?

Task Card: Alonzo's Table

Alonzo's Table: Depth vs. Time

Time (in minutes)	0	10	20	30	40	50	60	70	80	90	100	110	120
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Name: _____ Date: _____ Period: _____

Alonzo's Table: Depth vs. Time

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Recording Other Groups' Ideas

Group Members	Main Ideas from Group

3.2 Floating Down the River

A Solidify Understanding Task

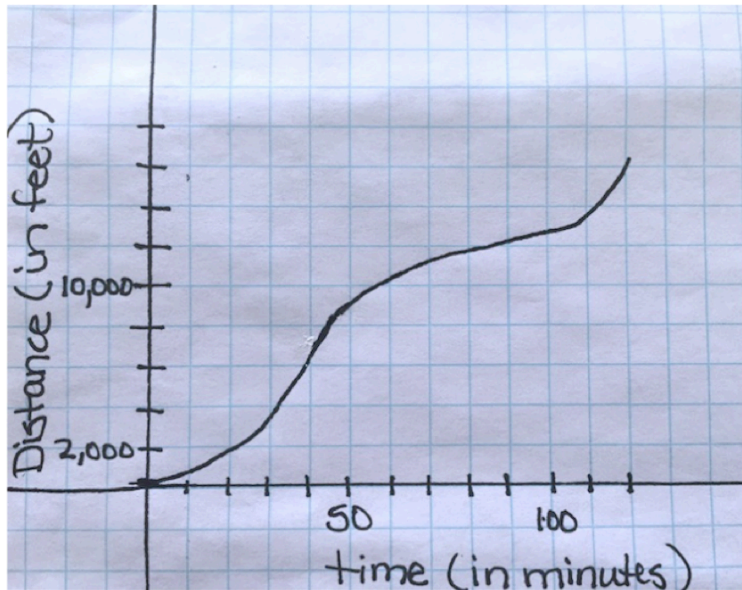


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Alonzo, Maria, and Sierra were floating in inner tubes down a river, enjoying their day. Alonzo noticed that sometimes the water level was higher in some places than in others. Maria noticed there were times they seemed to be moving faster than at other times. Sierra laughed and said “Math is everywhere!” To learn more about the river, Alonzo and Maria collected data throughout the trip.

Maria’s Graph: Distance vs. Time

Maria created a graph by collecting data on a GPS unit that told her the distance she had traveled over a period of time.

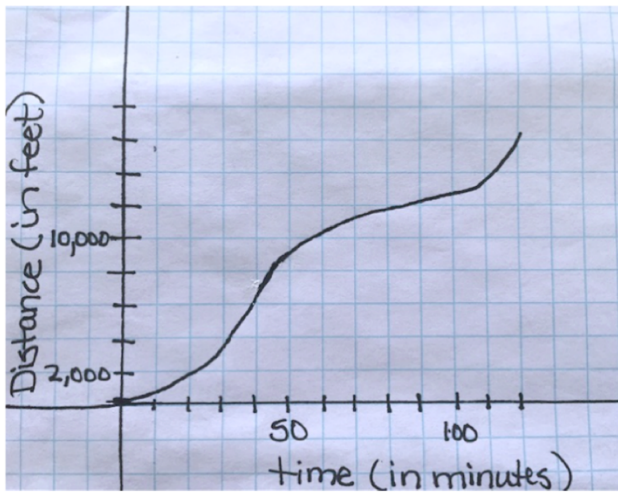


What do you **notice**?

What do you **wonder**?

Task Card: Maria's Graph

Maria's Graph: Distance vs. Time

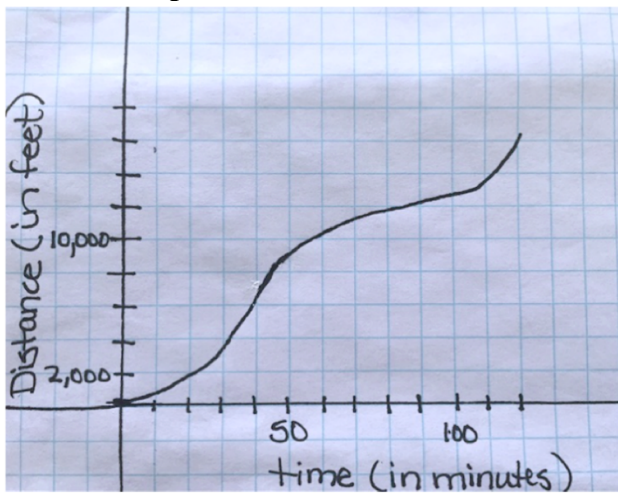


Directions: Use the data collected by Maria to describe the key features of this relationship:

1. **When** is the distance increasing?
2. **When** is the distance decreasing?
3. **How long** was Maria measuring the distance for?
4. What is the **range** of distances that Maria measured?
5. What is the **minimum** distance that Maria measured?
6. What is the **maximum** distance that Maria measured?

Task Card: Maria's Graph

Maria's Graph: Distance vs. Time

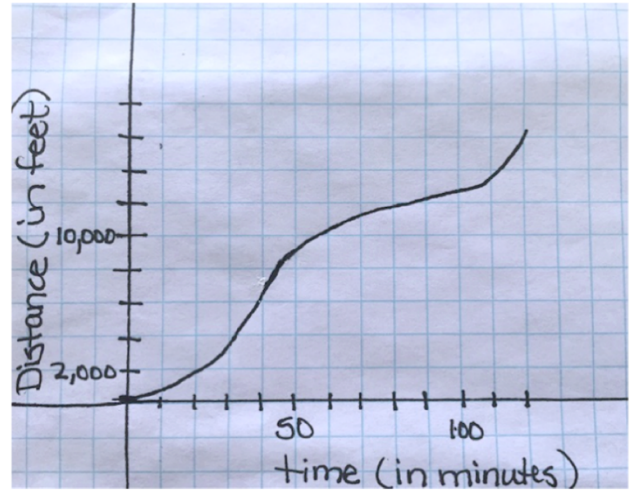


Directions: Use the data collected by Maria to describe the key features of this relationship:

1. **When** is the distance increasing?
2. **When** is the distance decreasing?
3. **How long** was Maria measuring the distance for?
4. What is the **range** of distances that Maria measured?
5. What is the **minimum** distance that Maria measured?
6. What is the **maximum** distance that Maria measured?

Name: _____ Date: _____ Period: _____

Maria's Graph: Distance vs. Time



Recording Other Groups' Ideas

Group Members	Main Ideas from Group

3.2 Floating Down the River

Part II: Interpreting data

Sierra looked at the data collected by her two friends and made several of her own observations. Explain why you either agree or disagree with each observation made.



- a) The depth of the water increases and decreases throughout the 120 minutes of floating down the river.

- b) The distance traveled is always increasing.

- c) The distance traveled is a function of time.

- d) The distance traveled is greater during the last ten minutes of the trip than during any other ten-minute interval of time.

- e) The domain of the distance/time graph is all real numbers.

- f) The y-intercept of the depth of water over time function is $(0,0)$.

- g) The distance traveled increases and decreases over time.
- h) The depth of the water is never 11 feet.
- i) The range of the distance/time graph is from $[0, 15000]$.
- j) The domain of the depth of water with respect to time is from $[0, 120]$
- k) The range of the depth of water over time is from $[4, 5]$.
- l) The distance/time graph has no maximum value.
- m) The depth of water reached a maximum at 30 minutes.