Snowstorms in Maryland

Look at the table below. What do you notice? What do you wonder?

## Snowfall in Baltimore, MD

| Dates of Major Snowstorms | Amount of Snow in Inches |
| --- | --- |
| February 11, 2006 | 13 $\frac{1}{10}$inches |
| December 18, 2009 | 18 inches |
| February 5, 2010 | 25 inches |
| February 9, 2010 | 19 $\frac{1}{2}$inches |
| February 12, 2014 | 11 $\frac{1}{2}$inches |
| January 22, 2016 | 29 $\frac{2}{10}$inches |

The meteorologists in Maryland track snowfall. These are the 6 major snowstorms in Baltimore, MD from 2006 to 2016. Why might they be interested in this data?

# Task 1

## Snowfall in Baltimore, MD

In order to solve this problem, refer to the table Snowfall in Baltimore, MD.

How much more did it snow on January 22, 2016 than February 5, 2010? Use the open number line to support your answer.

Use pictures, numbers, and/or words to explain how you used the number line to solve the problem:

# Task 2

## Snowfall in Baltimore, MD

In order to solve this problem, refer to the table Snowfall in Baltimore, MD.

Use the open number line to *efficiently* identify how much more it would have needed to snow on February 12, 2014 to have reached the height of snow on January 22, 2016.

Use pictures, numbers, and/or words to explain how you used the number line to solve the problem:

# Task 3

If the January 22, 2016 storm continued into the next day, and 3 $\frac{3}{5}$ more inches of snow fell, how much total snow accumulated during the storm? Use the number line to support your answer.

How is the strategy you used on the number line similar to task two? How is it different?

# Scoring Rubric: Task 1

## Score 2

Student response includes the following 2 elements.

* Reasoning Component = 1 point
	+ The student provides a valid explanation of how to use the number line to find the product.
* Computation Component = 1 point
	+ The student provides the response of 4 $\frac{2}{10}$ , or equivalent fraction or mixed number.

Sample Student Reponses

I started at 25 on the open number line and hopped to 29 $\frac{2}{10}$. I found the difference is 4 $\frac{2}{10}$ inches.

## Score 1

Student response includes 1 of the above elements.

## Score 0

Student response is incorrect and irrelevant

# Scoring Rubric: Task 2

## Score 2

Student response includes the following 2 elements.

* Reasoning Component = 1 point
	+ The student provides a valid explanation of how to use the number line to find the product.
* Computation Component = 1 point
	+ The student provides the response of 17 $\frac{7}{10}$, or equivalent fraction or mixed number.

Sample Student Reponses

I started at 11 $\frac{1}{2}$ on the open number line and hopped to 29 $\frac{2}{10}$. I found the difference is 17 $\frac{7}{10}$ inches.

## Score 1

Student response includes 1 of the above elements.

## Score 0

Student response is incorrect and irrelevant

# Scoring Rubric: Task 3

## Score 2

Student response includes the following 2 elements.

* Reasoning Component = 1 point
	+ The student provides a valid explanation of how to use the number line to find the product.
* Computation Component = 1 point
	+ The student provides the response of 32$\frac{8}{10}$ , or equivalent fraction or mixed number.

Sample Student Reponses

I started at 29 $\frac{2}{10}$ on the open number line. I added on 3 wholes to get 32$\frac{2}{10}$ . I then added $\frac{3}{5}$, or $\frac{6}{10}$ . I ended at 32$\frac{8}{10}$ . This strategy is different from the prior task because I was not finding the difference. Instead I was finding the end point. It was similar because I was still using an open number line to add up.

## Score 1

Student response includes 1 of the above elements.

## Score 0

Student response is incorrect and irrelevant