**File Name: I8R Frosty and Friends**

**Informative/Explanatory**

**Grade 8**

**Range of Writing**

**Introduces the topic** /focus **clearly, previewing what is to follow:** The writersuccinctly lays out the mathematics problem to be addressed, although the introduction assumes that the reader understands the premise

**Frosty and Friends**

 I need to find out how much Frosty will weigh after 12 days, and how many days it will take until he completely melts away.

How I Derived My Answer

**Organizes ideas, information, and concepts into broader categories,** using **headings and graphics** **to aid comprehension**

 First, I divided 38 by 1.3 to find out how many days it would take for him to completely melt away. I noticed that the answer was 29 days. I also observed that there was a remainder of .3, so it would take the 30th day for him to melt.

1)

Y = 38 – (1.3x)

Y = weight after certain number of days

X = number of days

38 = initial weight

1.3 =pounds lost / day

 Frosty – 38 lbs

Loses 1.3 lbs. / day

1.3 3.8

- 26 20

 12

* 6.5 5

5.5

5.2 4

.3 29

**Uses tables and charts to aid comprehension**

**Establishes and maintains a formal style**

 After 29 days, Frosty will have .3 pounds of snow left. Thus, he will completely melt on the 30th day.

2) 3)

**Uses precise and domain-specific language and vocabulary to explain and develop topic**

To accommodate with the children’s helping Frosty, the new equation will be: Y = 38 – (1.3X) + 0.8

The 0.8 stands for the weight of snow the children add to Frosty.

1.3 \* 17 = 22.1

+ (0.8 \* 17) = 13.6

1.3 38

 - 1.3 10

 25

* 2.6 2

 22.4 12 days

Frosty will weigh 22.4 lbs. after 12 days.

 Frosty = 35.7 after 17 days 22.1

 + 13.6

**Develops the topic with relevant, well-chosen, accurate facts, definitions,** andmathematical reasoning.

 35.7

I divided 38 by 1.3 to find the number of days it would take for him to melt completely. Then I used my equation to calculate is weight after 12 days. After I divided, I made a new equation for the third question: Y = 28 – (1.3X) – 0.8. I knew that if I did this then I would be able to figure out the third question. Finally, I figured out that if the children added 0.8 pounds of snow to him everyday, he would weigh 35.7 pounds after 17 days.

**Uses appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts**

My Solution

 Knowing that he will lose 1.3 pounds per day, it will take 30 days before Frosty completely melts away. Using the equation I made, Frosty would weigh 22.4 pounds after 12 days. Finally, if the schoolyard children pack 0.8 pounds onto him everyday, then he would weigh 35.7 pounds after 17 days.

**Provides a concluding section that follows from the information and explanation given**

In this informative/explanatory text from an eighth-grade mathematics class, the writer begins by setting out the mathematical problem of how much Frosty will weigh after twelve days and how long it will take him to melt away completely. While this introduction would be clear enough to those already familiar with this assignment (such as the teacher), other readers might have some questions, such as who built Frosty in the first place or how much he initially weighed.

The writer organizes the explanation by category (problem, approach, solution) and includes subheadings and graphics to aid comprehension. He uses appropriate transitions to clarify relationships among ideas and concepts. Within each chunk, the writer uses precise language and domain-specific vocabulary to accurately describe the problem and explain his reasoning. This makes the writer’s thinking and understanding easy to follow.

The tone of the explanation is objective and the style formal—both appropriate for describing mathematical thinking. The conclusion follows from and supports the main point of the piece.

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