**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U3 HWK # 3 *Comparing Proportional Relationships***

1. The graph below shows the distance two snowboarders have traveled down a hill for several seconds. Hannah is traveling 18 meters per second.

Hannah

Torah

1. Which equation below is the best choice to describe the distance Torah travels after *x* seconds.

|  |  |
| --- | --- |
|  |  |
|  |  |

1. Explain your reasoning for your choice above.
2. The unit rate of 10 meters per seconds describes Christina’s speed going down the same hill. Draw a line that could possibly represent her speed.
3. At Sweet Chicks Bakery the equation** represents the total cost to purchases cupcakes; where *x* represents the number of cupcakes and *y* represents the total cost. The graph given below shows the cost for buying cupcakes at Butter Cream Fairy Bakery.



1. Which bakery offers the better deal? Use the equation and graph to justify your answer.
2. Use the information given above to determine how much it will cost to buy 10 cupcakes at the bakery with the better deal.
3. The table given below shows how much money Charlie earned every day that he worked last week. He gets paid the same rate every hour.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tuesday | Wednesday | Friday |
| Hours Worked | 4 | 5 | 3.5 |
| Money Earned | $38.00 | $47.50 | $33.25 |

Sophia earns $10.50 per hour at her job.

1. Using the same coordinate plane, draw a line that represents Charlie’s earnings if *x* represents the number of hours worked and *y* represents the amount of money earned. Also draw a line that represents how much Sophia earns. Label each line with the person’s name.
2. How can you use this graph to determine who makes more money?