Name $\qquad$
Notes
Date $\qquad$ Period $\qquad$

Ms. Algebra's class decides to participate in a walkathon to raise money for a local hospital. Each participant in the walkathon must find sponsors to pledge a certain amount of money for each mile the participant walks. The class wants to agree on how much they will ask for. Leanne says that $\$ 1$ per mile would be appropriate. Gilbert says that $\$ 2$ per mile would be better because it would bring in more money. Anna points out that if they ask for too much money, not as many people will want to be sponsors. She suggests that they ask each sponsor for a $\$ 5$ donation plus $50 \$$ per mile.

1. Make a table showing the amount of money a sponsor would owe under each pledge plan if a student walked distances between 0 and 10 miles.

| Distance <br> (miles) | Money owed |  |  |
| :---: | :---: | :---: | :---: |
|  | Leanne | Gilbert | Anna |
| 0 |  |  |  |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |

2. Graph the 3 pledge plans on the same graph. Use a different color for each student.

|  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
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3. For each pledge plan, write an equation that can be used to calculate the amount of money a sponsor owes, given the total distance a student walks. Let $m$ represent the miles walked and $P$ the pledge amount.

Leanne $\qquad$ Gilbert $\qquad$ Anna $\qquad$
4. What affect does increasing the amount pledged per mile have on ...
the table? $\qquad$
the graph? $\qquad$
the equation? $\qquad$
5. If a student walks 8 miles in the walkathon, how much would a sponsor owe under each pledge plan? Explain how you got your answer.

Leanne $\qquad$ Gilbert $\qquad$ Anna $\qquad$
6. For a sponsor to owe a student $\$ 10$, how many miles would the student have to walk under each pledge plan? Explain how you got your answer.

Leanne $\qquad$ Gilbert $\qquad$ Anna $\qquad$
7. Anna suggested that each sponsor make a $\$ 5$ donation and then pledge $50 \$$ per mile. How is this $\$ 5$ donation represented in $\qquad$
the table? $\qquad$
the graph? $\qquad$
the equation? $\qquad$

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8. On the graph of one pledge plan, the point $(2,6)$ means that a student who walks 2 miles earns $\$ 6$ from each sponsor. On which of the graphs is the point $(2,6)$ ?
9. Find a point on each graph, and describe what the coordinates of the point mean in the context of the walkathon.
10. Write an equation for a pledge plan whose graph is a steeper line than any of the other lines you graphed in the problem. Check your equation by graphing it on the axes with the other three lines.

11. Write an equation for a pledge plan whose graph is less steep than any of the lines you graphed in the problem. Check your equation by graphing it on the axes with the other lines.


