

Name \_\_\_\_\_ Date \_\_\_\_\_

## Tickets for Sale

### Standard Form of Linear Equations

1. Mr. Johanssen is the history teacher at Franklin Middle School. He gives his class 50-question multiple choice tests. Each correct answer is worth 2 points, while a half of a point is deducted for each incorrect answer. If the student does not answer a question, that question does not get any points at all. This type of scoring penalizes students for guessing.
  - a. Determine the test score of a student who has 30 correct answers and 5 incorrect answers. Show your work.

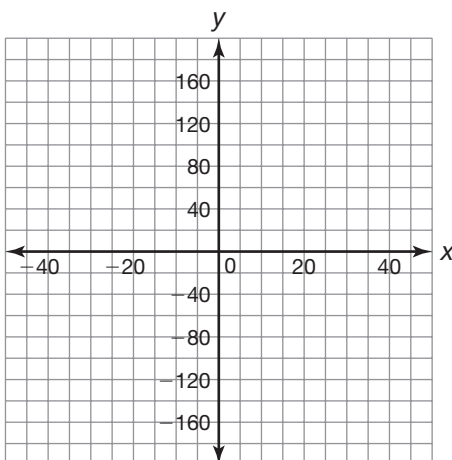
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- b. If you know the number of correct answers, are you able to determine the total number of points the student earned? Explain your reasoning.

- c. A student needs to earn 80 points on the test in order to keep an A grade for the semester. Write an equation that represents the situation in terms of the number of incorrect answers.

- d. Determine the  $x$ - and  $y$ -intercepts of the equation and use them to graph the equation. Explain what each intercept means in terms of the problem situation.

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- e. What is the slope of this graph? What does it mean in terms of the problem situation?
- f. If the student had 43 correct answers, how many were incorrect or not answered? Does your answer make sense in the context of the problem situation? If not, what numbers of correct answers and incorrect answers do make sense?