

Figure 2.4

**Mathematics Instruction and Higher-Level-Cognitive-Demand Mathematical Task Scenario**

**Directions:** Read the scenario, and answer the questions that follow.

Mary Mostessi enters her grade 4 class prepared to engage her students in an active learning experience. She planned the unit with her grade-level collaborative team, and she is excited about sharing her and her students' experiences with the team. A few of her team members were able to come to her class and observe students during the lesson. After her students are settled into class, she presents the following task.

Michael watched his favorite football team play a game on television. During the game, however, he had to complete a chore for his father. Because he had to do the chore, he missed the times when his team scored. His team did win, and he knows that the final score for his team was 47. The possible ways of scoring are touchdowns (6 points each), field goals (3 points each), safeties (2 points each), two-point conversions (2 points each), and extra points (1 point each). According to the rules of football, how might have Michael's team scored its points? Explain.

1. Ms. Mostessi and her team selected this task because they thought it would engage students. What do you suppose the teachers considered engaging about the task?
2. How would you modify the task to increase its potential to engage students?
3. What is the targeted learning standard for this task?
4. What other real-life topic might be useful as a context for the same mathematics in the task?
5. What can you learn about students as they engage in and respond to this task?
6. What do you expect students' wonderings and questions to be regarding the task?
7. What do you expect students' misunderstandings to be regarding the task?
8. What might make the mathematics of the task less or more challenging to meet the needs of students?
9. Because student responses to the mathematical task will vary, how do you propose to facilitate assessment of the task?