

A school is holding a raffle to earn money. This list shows all the prizes in the school's raffle.

- \* A computer that costs \$349
- \* A book collection that costs \$42
- \* A gift certificate that costs \$25
- \* A pair of movie tickets that costs \$18
- \* A gift basket that costs \$16

The raffle ticket price is set so that 75 raffle tickets will pay for all of the prizes.

Part A:

Create an equation that can be used to find the total amount of money the school earns,  $n$ , by selling  $x$  tickets. Show your work used to create this equation.

Part B:

The school's goal is to raise at least \$850 more than the total cost of the prizes. What is the minimum number of raffle tickets that have to be sold in order for the school to reach its goal? (Show your work)

Advanced Topics in Algebra I

Score Rubric

Part A	
Score	Description
3	<p>Student response includes the following 3 elements.</p> <p>Modeling component: 2 pts</p> <ul style="list-style-type: none"> <li>* Valid equation</li> <li>* Logical work to find the price per ticket</li> </ul> <p>Computation: 1 pt</p> <ul style="list-style-type: none"> <li>* Correct computation for finding the price of per ticket</li> </ul> <p>Sample Student Response</p> <p>The total cost of the prizes is <math>349 + 42 + 25 + 18 + 16 = 450</math>.</p> <p>For 75 tickets to make \$450, they must each cost <math>450 \div 75 = \\$6</math>.</p> <p>Equation:</p> $n = 6x - 450$
2	Student response includes 2 of the 3 elements
1	Student response includes 1 of the 3 elements
0	Student response is incorrect or irrelevant.
Part B	
Score	Description
2	<p>Student response includes the following elements:</p> <ul style="list-style-type: none"> <li>* Logical progression toward problem solving</li> <li>* Correct computation to find the number of tickets and determine the reasonable solution</li> </ul> <p>Sample of student work:</p> $6x - 450 \geq 850$ $6x \geq 1300$ $x \geq 216.6666$ <p>Answer: the minimum number of tickets is 217</p>
1	Student response includes 1 of 2 elements
0	Student response is incorrect or irrelevant