# 8.F Chicken and Steak, Variation 2

## Task

Consider the relationship between the number of pounds of chicken and the number of pounds of steak that can be purchased for a barbecue on a fixed budget.

a. Write an equation for this relationship given that chicken costs $1.29 per pound, steak costs $3.49 per pound, and the total allotment for both is  $100.

b. Sketch a graph for the equation. Describe how the amount of steak that can be purchased depends on the amount of chicken purchased. What is the significance of the graph's $x$- and $y$-intercepts?

c. Re-write the equation to show the amount of steak purchased in terms of the amount of chicken purchased. Use this equation to describe how the amount of steak purchased changes with each pound of chicken purchased.

d. Both the equation and the graph can be used to find amounts of chicken and steak that can be purchased for the barbecue on a fixed budget of $100. Explain how important features of the graph can be seen or found with the equation and describe what they say about the relationship between chicken and steak purchases.