

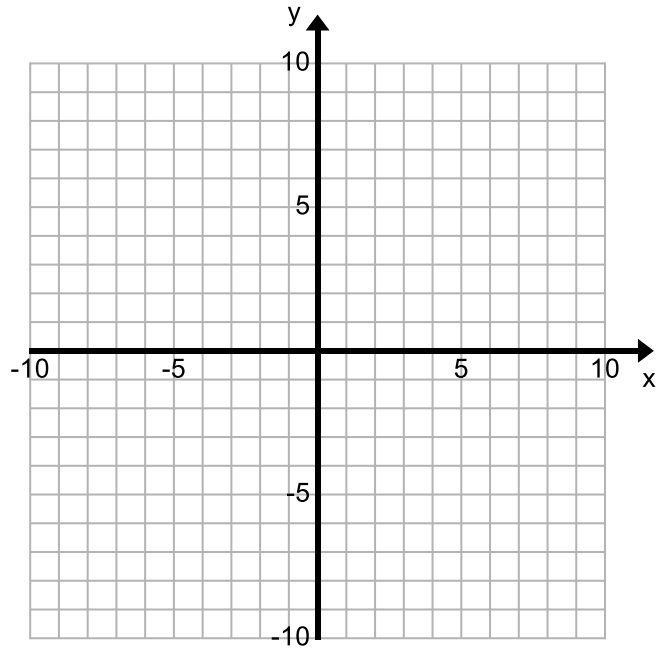
Quadratic Function Properties: Part Three

1. Given the equation of the quadratic function:

- find points to plot using a mapping diagram and/or a table of values
- identify the x – intercepts (on the graph, coordinates)
- identify the y – intercept (on the graph, coordinates)
- identify the vertex (on the graph, coordinates)
- write the equation for the axis of symmetry
- write the domain and range

$$y = -\frac{1}{2}x^2 + 2x + 6$$

<i>X</i>	<i>Y</i>



2. The number of hamburgers sold at a concession stand is related to the price of the hamburgers as follows:

Price	\$3.00	\$3.25	\$3.75	\$4.50
Burgers Sold	500	475	425	350

- a) Calculate the revenue for each burger price.

Price	\$3.00	\$3.25	\$3.75	\$4.50
Revenue	\$1500.00			

- b) Find a quadratic function to represent the price and the revenue for the hamburger. State a window for this information and sketch your function:

X: [____,____,____]

Y: [____,____,____]



- c) We know a \$3.00 hamburger price will generate revenue of \$1500. What other price will also generate revenue of \$1500?
- d) If you were the manager of the concession, what price would you set for the hamburgers to maximize the concession revenue?