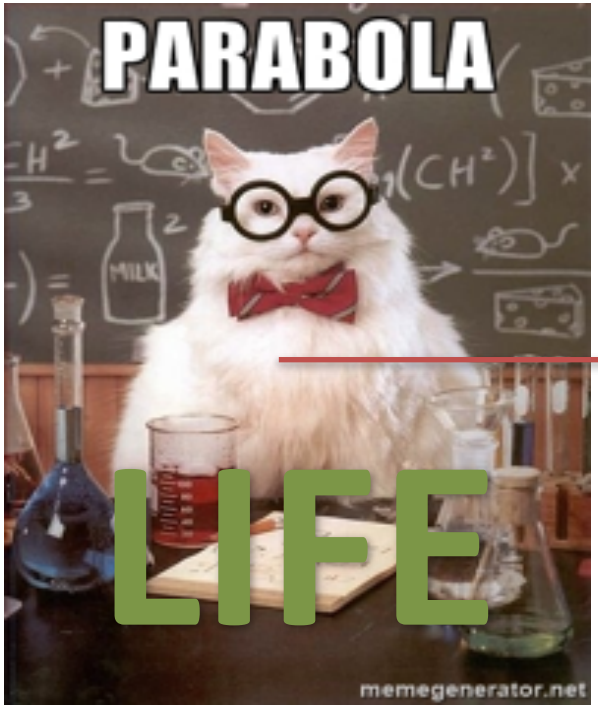
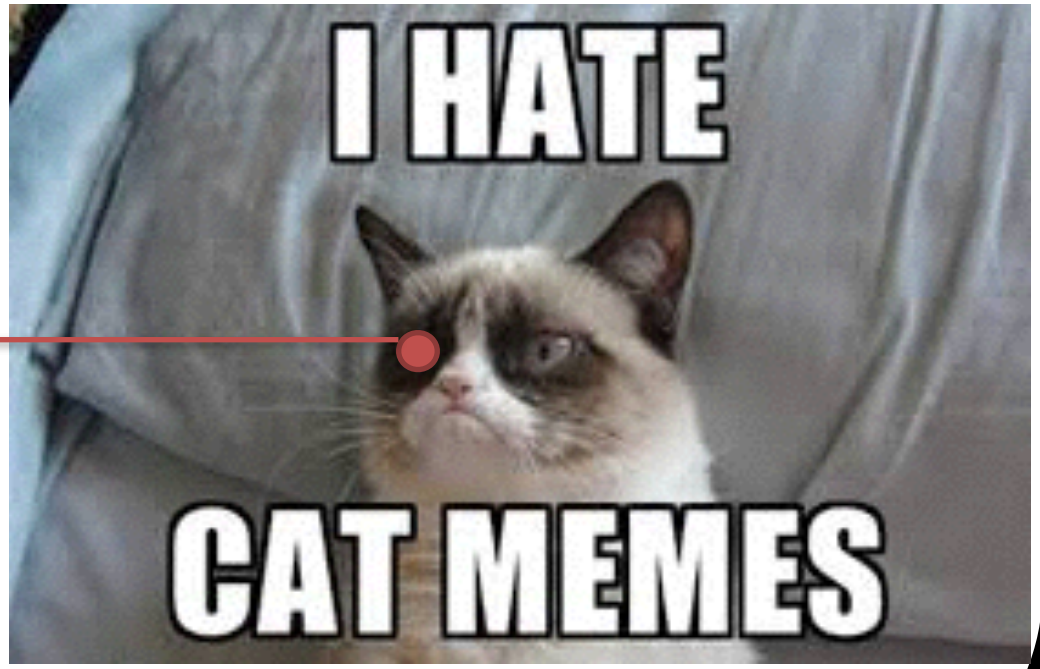
Lesson 2.2.1 – 2.2.2: Interpreting Key Features of Quadratic Functions: Even or Odd, Increasing or Decreasing & Domain





By the end of this lesson, I will be able to answer the following questions…

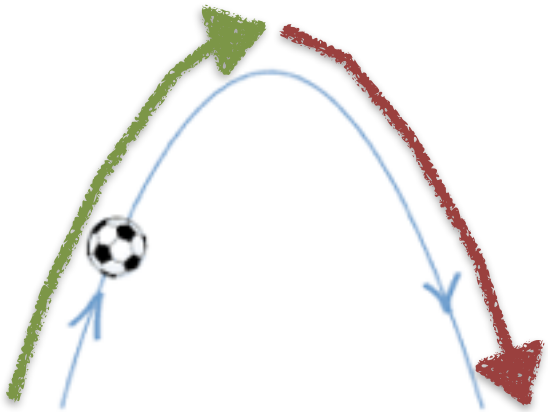
1. How do I determine whether a function is **INCREASING** or **DECREASING**?

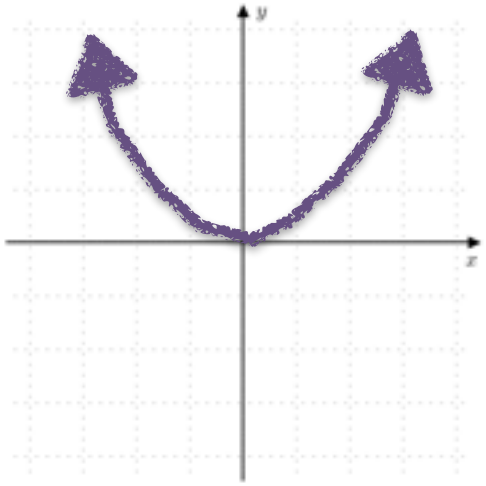
2. How can I determine whether a function is **EVEN**, **ODD** or **NEITHER**?

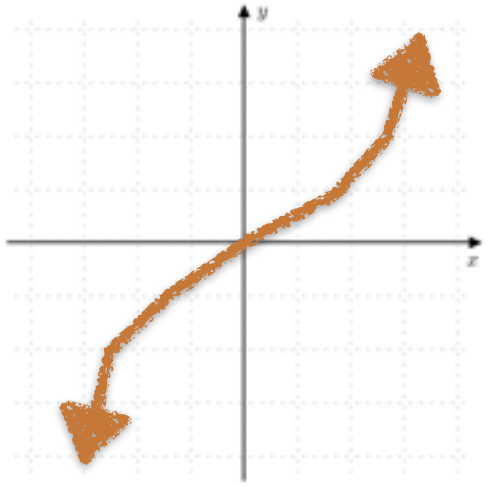
3. How do I determine the **DOMAIN** of a quadratic function?

Vocabulary

1. Increasing Interval
2. Decreasing Interval
3. Even Function
4. Odd Function
5. Domain







Prerequisite Skills with Practice

Understanding how far a parabola stretches from left to right.

Example One

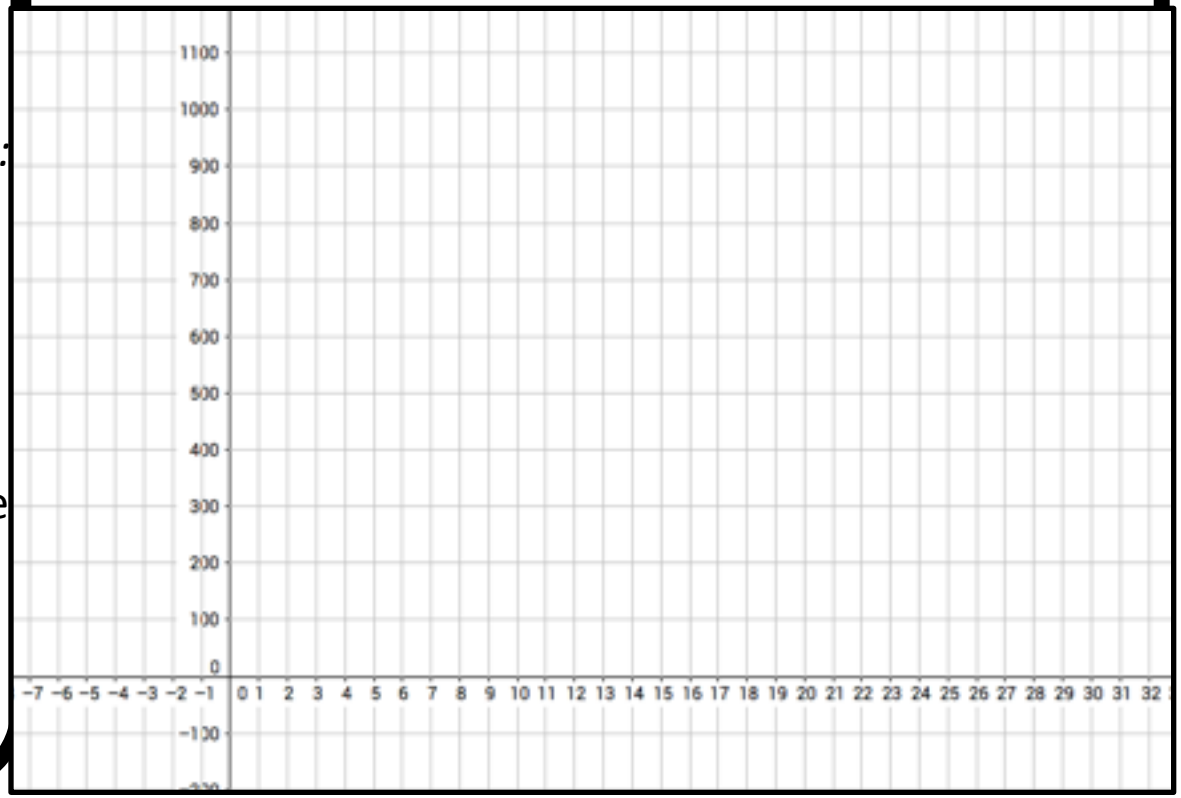
Identifying/interpreting increasing and decreasing intervals. Understanding domain as it relates to a scenario.

A local store's monthly revenue from T-shirt sales is modeled by the function

$$f(x) = -5x^2 + 150x$$

Use the equation and graph to answer the following questions:

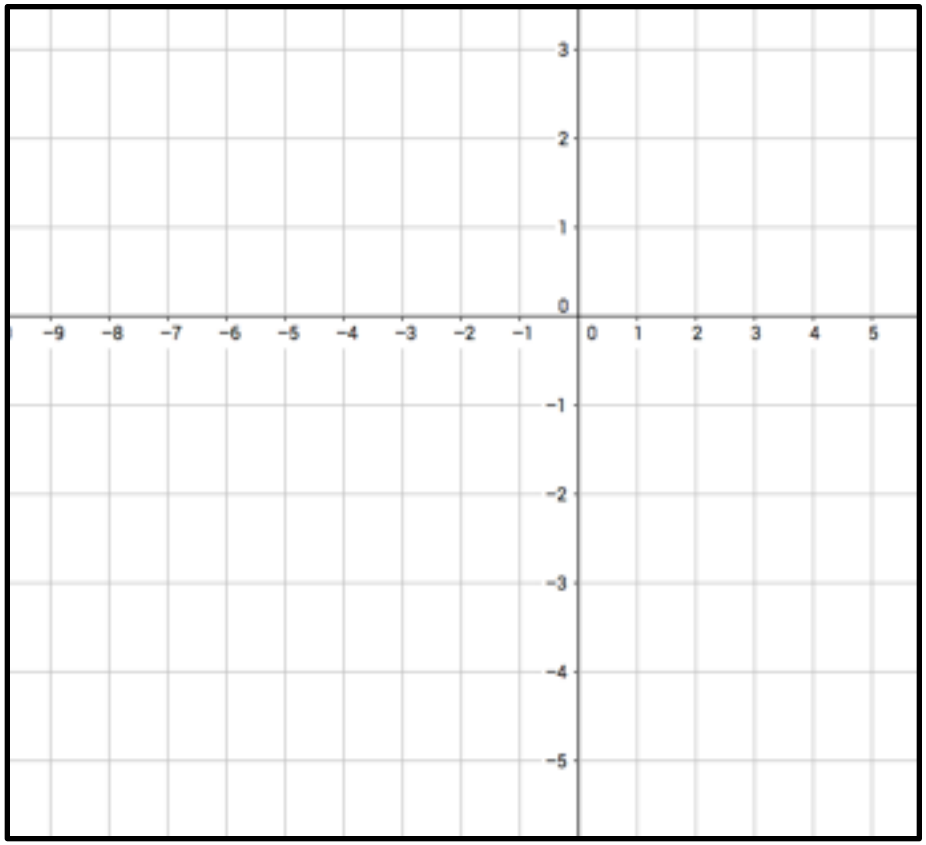
At what prices is the revenue increasing? Decreasing?
What is the maximum revenue?
What prices yield no revenue?
What is the feasible domain of the function?



Example Two

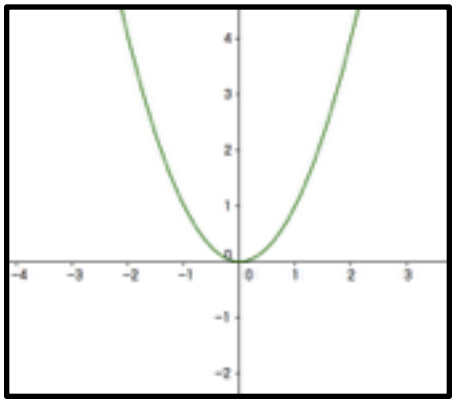
Identifying/interpreting increasing and decreasing intervals. Understanding domain as it relates to an graph unrelated to a scenario.

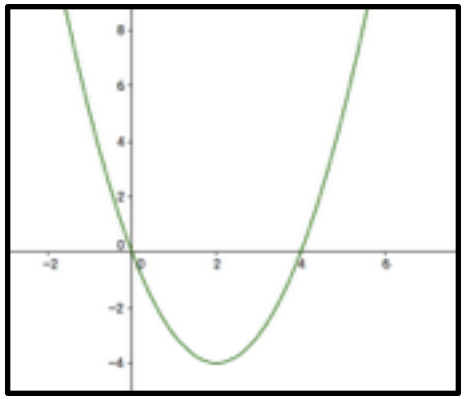
A function has a *minimum value* of –5 and *x-intercepts* of –8 and 4. What is the value of *x* that minimizes the function? For what values of *x* is the function increasing? Decreasing? What is the domain of the function>

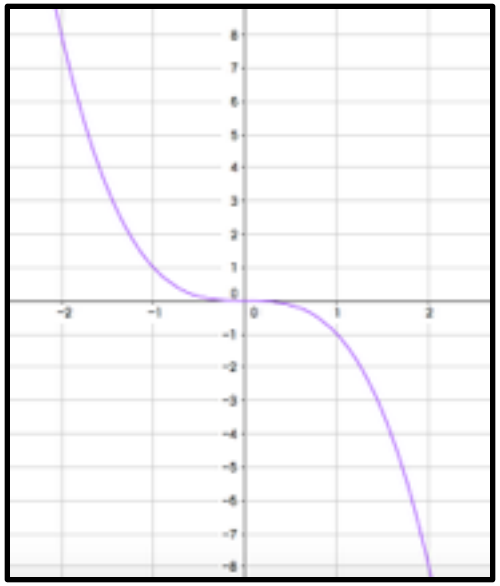


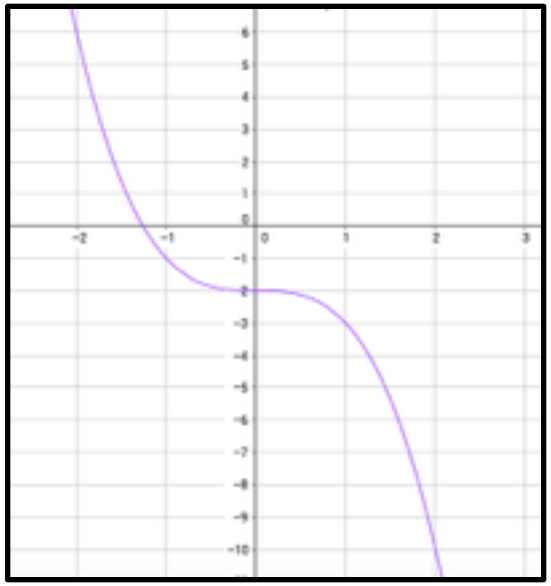
Example Three

Understanding the difference between an even or odd function.









THE END

Visit PlottsMath for assignment details