

## Chapter 4: Sections 1 and 2 (4 questions)

## Quadratic Functions (3 questions)

Quiz from Week 5

MyOpenMath Practice Problems (work through them again)

Notes and Powerpoints

Major Ideas:

- 1) Be able to identify and interpret features of a quadratic function and its graph, including vertex, x-intercepts, y-intercept
- 2) Be able to write the revenue function  $R(x) = \text{price} * \text{quantity}$
- 3) Be able to write the profit function given revenue and cost, where  $\text{Price} = \text{Revenue} - \text{Cost}$
- 4) Whenever we see supply, demand, cost, revenue, and profit we will consistently use "x" to represent *quantity* of a good that is produced/sold
- 5) Be able to write the equation of a quadratic function from a graph in vertex form
- 6) Be able to use and apply the quadratic function equation to solve problems, whether in standard form or vertex form

## Polynomial Functions (1 question on this topic)

MyOpenMath Practice Problems (work through them again)

Notes and Powerpoints

Major Ideas:

- 1) Polynomial Functions involve powers of x added/subtracted
- 2) We can create new polynomials by multiplying (for example) a linear function times a quadratic function, or just by multiplying two polynomial functions
- 3) Polynomial functions have graphs that are shaped like M or W, or lightning bolt
- 4) Recognize a turning point on a graph
- 5) Be able to use the fact that between any two x-intercepts there must be a turning point.

## Chapter 5: Sections 1-3 (4 questions)

Quiz from Week 6

MyOpenMath Practice Problems

Notes and Powerpoints

Major Ideas:

- 1) Be able to graph an exponential function, or graph points and determine the nature of the graph (quadratic, polynomial, exponential, linear)
- 2) Be able to solve application problems involving exponential growth or decay (also appreciation/depreciation)
- 3) Be able to use logarithms to solve for the exponent in a problem

- 4) Be able to recognize the graph of a logarithm function as well as an exponential function

Chapter 6 (Sections 1 and 2) (4 questions)

Quiz from Week 7

MyOpenMath Practice Problems (work through them again)

Notes from 10/10 (we did 8 problems using the formula sheet)

Major Ideas

- 1) Be able to solve any problem involving simple interest
  - a. solve for amount of interest on simple interest loan
  - b. figure out the monthly payment on a loan by adding the principle + interest and dividing by the number of months to pay it off
- 2) Be able to solve problems involving compound interest
  - a. recognize when to use the regular compound interest formula versus the formula when number of compounding periods is not = 1
  - b. be able to solve either for A or P
  - c. be able to solve for the amount of time it takes to reach a financial goal
  - d. be able to solve for the APY (annual percentage yield) when dealing with compound interest
- 3) Be able to solve an annuity problem. Given the monthly payment, interest rate, and time, calculate the future value of an annuity