College Algebra: Module 6 What You Need To Know

2-26-15

1 Solving Other Types of Equations (Section 1.6)

- Just going to do example problems and for solving various types of equations

2 Rectangular Coordinates: Graphing Circles and Other Relations (Section 2.1)

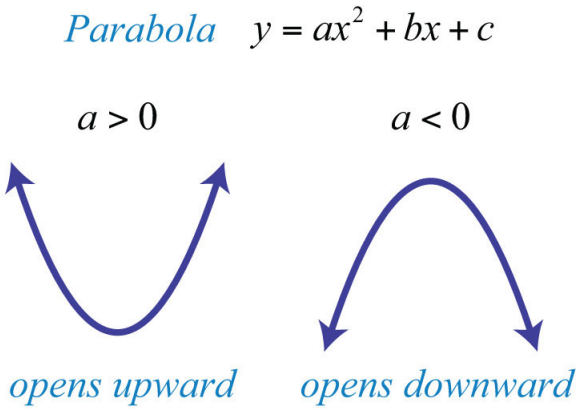
Distance Between Two Points:

$$d\Big((x_1, y_1), (x_2, y_2)\Big) = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

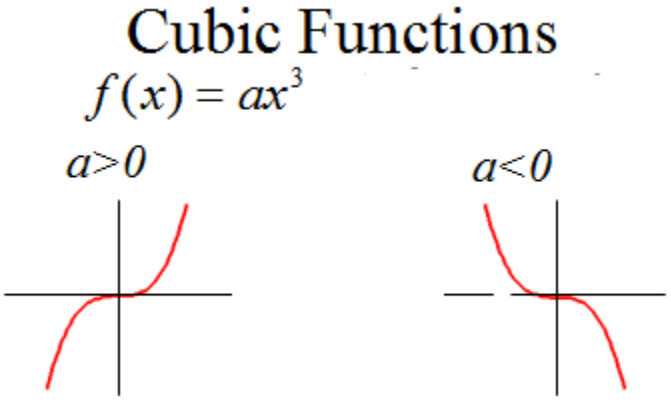
Midpoint Between Two Points:

$$M\Big((x_1, y_1), (x_2, y_2)\Big) = \Big(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\Big)$$

Parabolas:



Cubics:



Standard Equation for a Circle:

$$(x-h)^2 + (y-k)^2 = r^2$$

Center: (h, k) **Radius:** $\sqrt{r^2} = r$

Word Problem: (Multiple Rates) A swimming pool holds $480,000$ liters of water. The pool has two drainage pipes. When the pool is completely full, the first pipe alone can empty it in 240 minutes, and the second pipe alone can empty it in 160 minutes. When both pipes are draining together, how long does it take them to empty the pool?