# 7.0 Exponentials, Getting Started

## 1. Comparing Graphs (complete the chart)

| Function | Linear | Quadratic | Exponential |
|---|---|---|---|
| Equation | | | |
| Graph (increasing) | | | |
| Graph (decreasing) | | | |
| Table of Values | | | |

2. Exponential Functions

a) Terms

eg. $5^3$

b) Forms

eg. $5^3 = 5 \times 5 \times 5 = 125$

c) Exponential laws (must have same base or exponent)

Name as many as you can remember!

*See Pg 389 (chart) in Text

We will go over these in more detail next lesson.

d) Roots

eg. What is the square root of 289?

How do we express this in exponential form?

Roots are exponential functions!

*Use BEDMAS and Exponent laws to evaluate.

Eg. Solve

a) $\sqrt{25}$

b) $36^{\frac{1}{2}}$

c) $27^{\frac{1}{3}}$

Examples

1. Evaluate each of the following:

a) $\sqrt[3]{125}$ b) $(-3)^4$ c) $(4 \div 2)^3$ d) $5^3 - 3^2$ e) $\left[(-4)^3\right]^2$ f) $-3^4$

2. Solve.

a) $5^x = 5$ b) $3^y = 81$

To solve exponential equations, make the base on each side then solve for the exponent!

HW Pg. 388 #2-9(a & c only for all)