Parent Functions (non-translated)

Section 1-2: Types of Functions

* Need to Know

* Name of function:

Linear

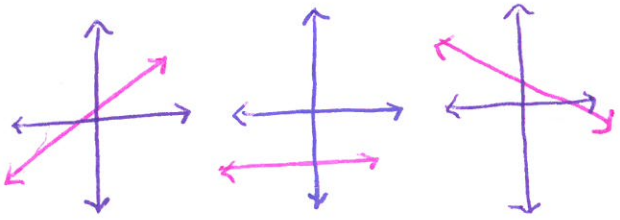
General equation:

$f(x) = ax + b$

Features: (AWV)

- all lines except vertical
- one-to-one

Graph:



* Name of function:

Quadratic

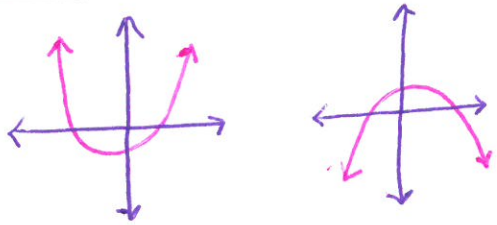
General equation:

$f(x) = ax^2 + bx + c$

Features: (AWV)

- has max. or min.
- symmetrical

Graph:



* Name of function:

Power

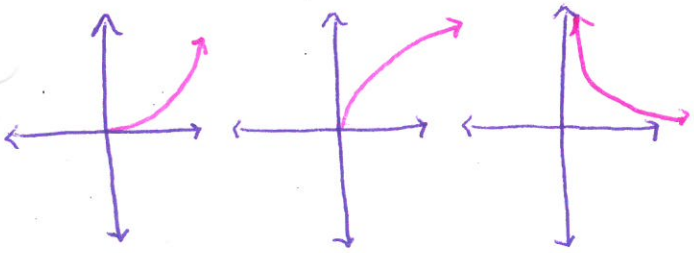
General equation:

$f(x) = ax^b$

Features: (AWV)

- starts @ origin
  OR
- has asymptotes on x + y axis

Graph:



* Name of function:

Exponential

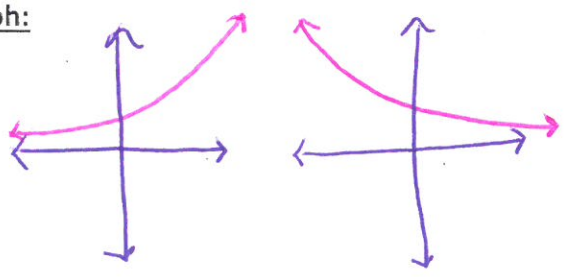
General equation:

$f(x) = a \cdot b^x$

Features: (AWV)

- doesn't go through origin
- asymptote @ x-axis

Graph:



These are nice to Know

Section 1-2: Types of Functions

Name of function:

Logarithmic

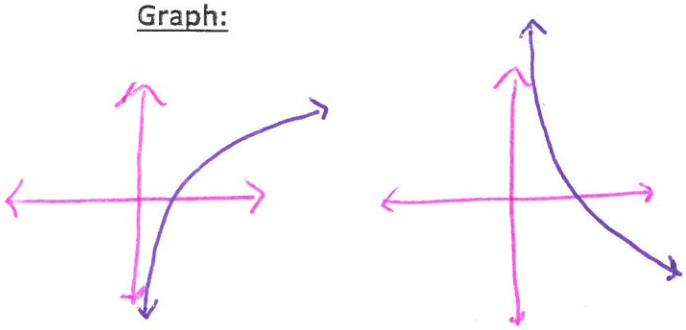
General equation:

$f(x) = a + b \ln x$

Features:

- inverse of exp. funct.
- has asymptote @ y-axis

Graph:



Name of function:

Logistic

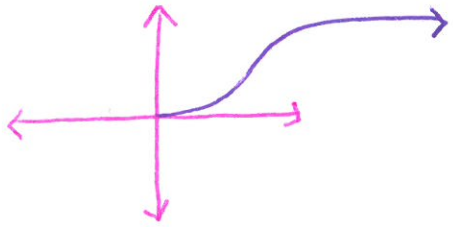
General equation:

$f(x) = \frac{c}{1+ab^{-x}}$

Features:

- looks (and acts) exponential, but then slows down & levels off
- has cap

Graph:



Name of function:

Polynomial

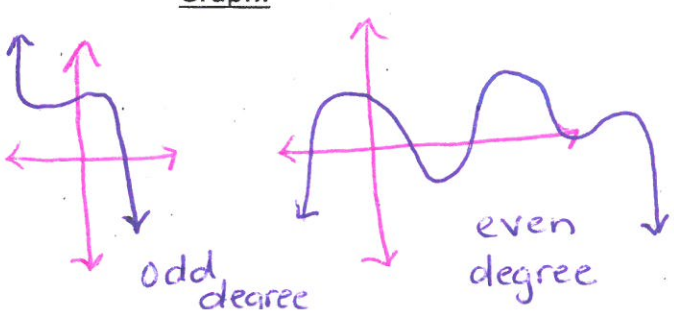
General equation:

$f(x) =$

Features:

- # of branches = degree of function

Graph:



Name of function:

Rational Algebraic

General equation:

$f(x) =$

Features:

- has holes (removable discontinuity)
  OR
- has asymptotes (non-removable discontinuity)

Graph: