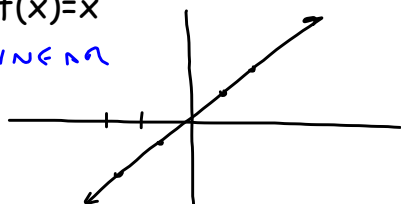1.3 Parent Functions   Feb 4
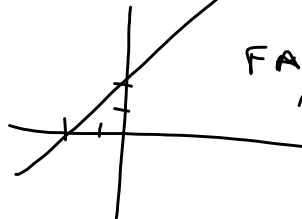
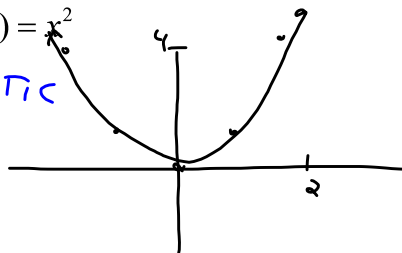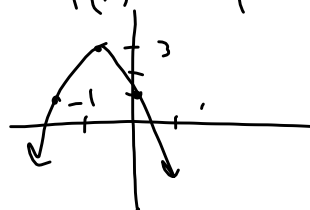$f(x)=x$

LINEAR

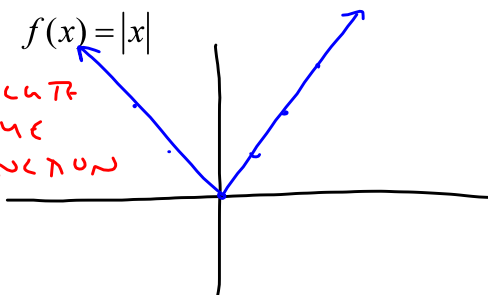$f(x) = x + 2 \quad = (x+2)$

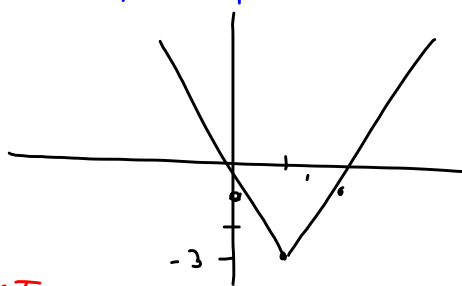FAMILY
MEMBER.

$f(x) = x^2$

QUADRATIC

$f(x) = -2(x+1)^2 + 3$
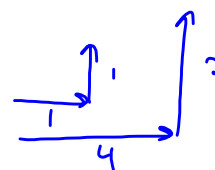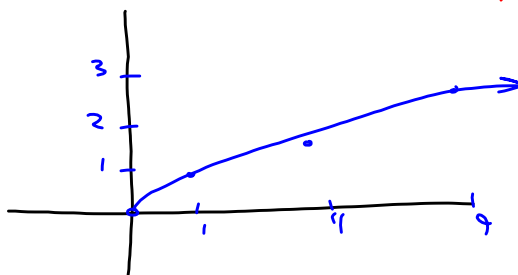
$f(x) = |x|$

ABSOLUTE
VALUE
FUNCTION

$y = 2|x-1| - 3$

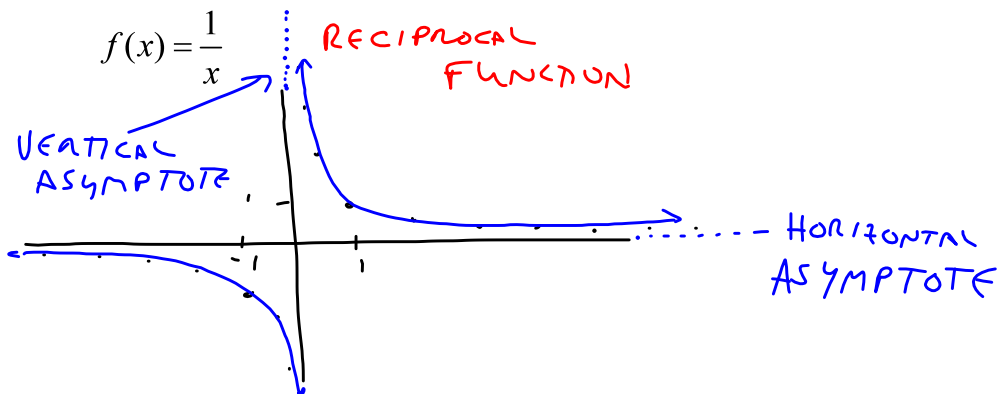$f(x) = \sqrt{x}$

SQUARE ROOT
FUNCTION

3
2
1

$f(x) = \dfrac{1}{x}$ RECIPROCAL
FUNCTION

VERTICAL
ASYMPTOTE

HORIZONTAL
ASYMPTOTE

Which function has?

A vertex   QUADRATIC , ABSOLUTE VALUE

A restricted domain   SQUARE ROOT , RECIPROCAL
                         $X \geq 0$ $D = \{x \in \mathbb{R} / X \neq 0\}$

Asymptotes   RECIPROCAL , EXPONENTIAL
                                       $y = 2^x$

During this course we will also be graphing exponential and trigonometric functions. Try some on the graphing calculator and notice the properties of these functions.

Homework: download and install the ti83.zip application from my web page and learn to use it.

See Appendix B