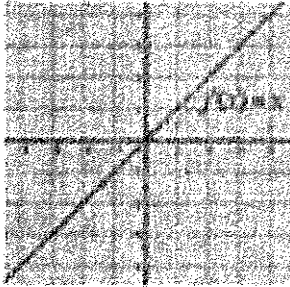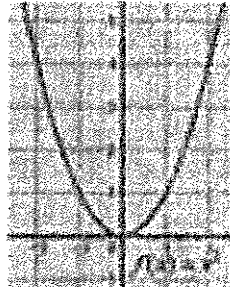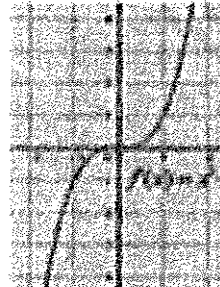Name Schlansky

Mr. Schlansky

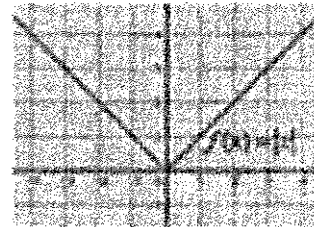# *Parent Functions*
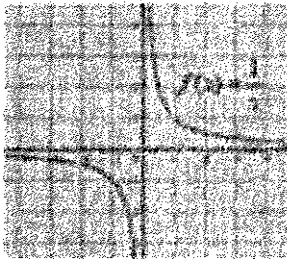
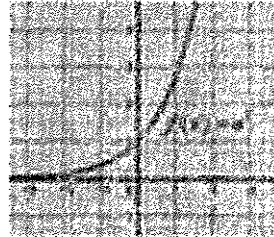## Parent Functions

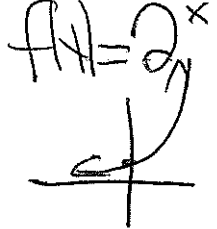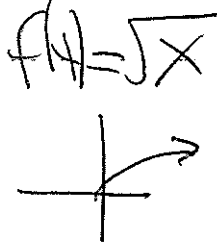| Linear | Quadratic | Cubic | Absolute Value |

| Rational | Exponential | Logarithmic | Square Root |

Sketch the parent function and write the parent function equation for the following types of functions
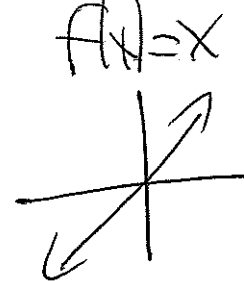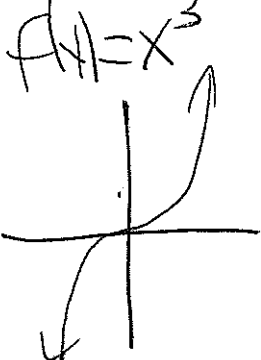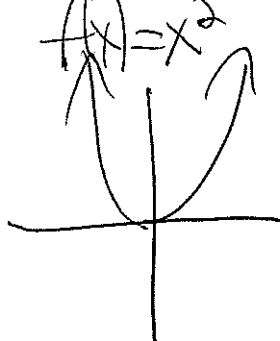
Exponential

$$f(x) = 2^x$$

Square Root

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

Absolute Value

$$f(x) = |x|$$

Linear

$$f(x) = x$$

Cubic

$$f(x) = x^3$$

Quadratic

$$f(x) = x^2$$

Logarithmic

$$f(x) = \log x$$
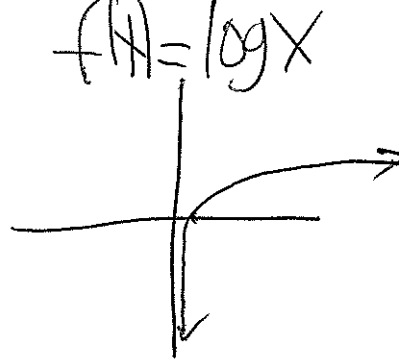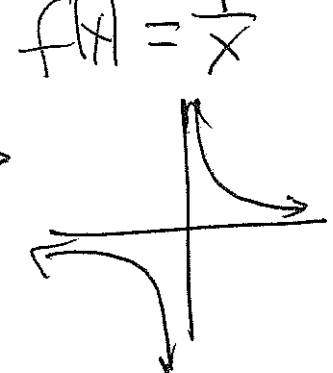
Rational

$$f(x) = \frac{1}{x}$$

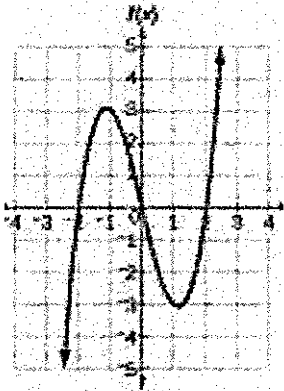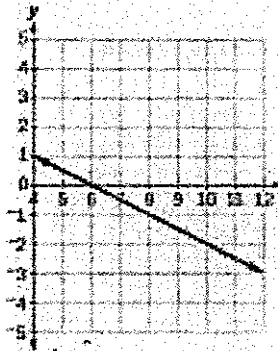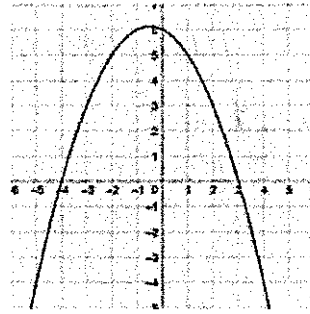**State the type of function and equation of the parent function for each.**
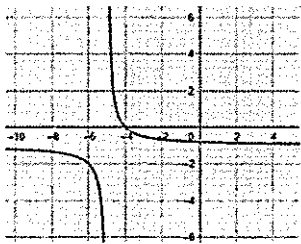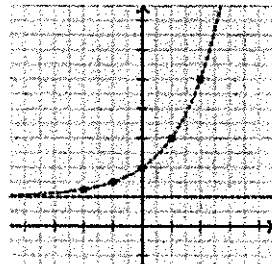
cubiL
$f(y)=x^3$

linear
$f(y)=x$

quadratiL
$f(y)=x^2$
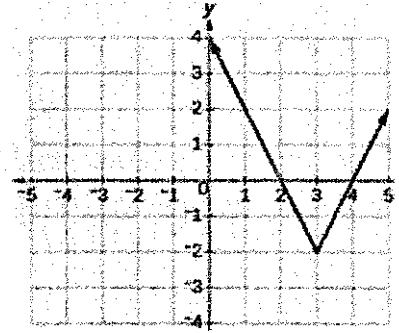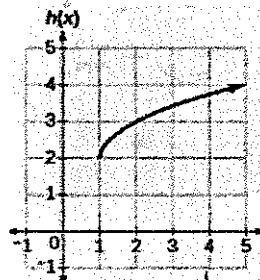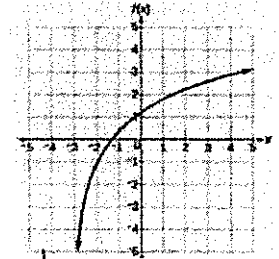
absolute value
$f(y)=|x|$

rational
$f(x)=\frac{1}{x}$

exponential
$f(x)=2^x$

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

logarithmic
$f(x)=\log_2 x$

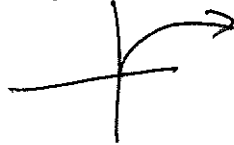**State the type of function, equation of the parent function, and sketch of the parent function**

$f(x)=(x-2)^3+7$

cubic
$f(x)=x^3$

$f(x)=-2\sqrt{x-4}+6$

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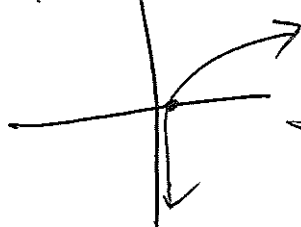$f(x)=\sqrt{x}$

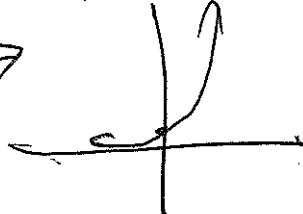$f(x)=2|x-7|+3$

absolute value
$f(x)=|x|$

$f(x)=-x^2-8$

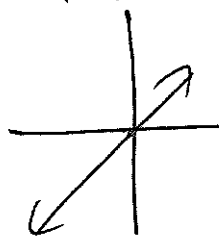quadratic $f(x)=x^2$

$f(x)=\log_2(x-8)$

logarithmic
$f(x)=\log x$

$f(x)=3^{x-1}$

exponential
$f(x)=3^x$

$f(x)=\frac{x-7}{3}$

linear
$f(x)=x$

$f(x)=\frac{2}{x-1}+2$

rational
$f(x)=\frac{1}{x}$