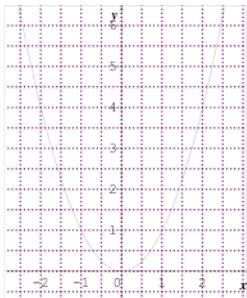


**Graph****Expression****Images****Table of variation**

Parabola

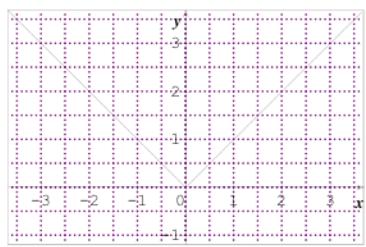
$$f(x) = x^2$$

Square function  
(x squared)

$$\begin{cases} f(2) = 4 \\ f(-3) = 9 \end{cases}$$

$x$	$-\infty$	0	$+\infty$
$f(x)$		0	

And :  $f(-7)=49$



looks like a "V"

**Expression****Images****Table of variation**

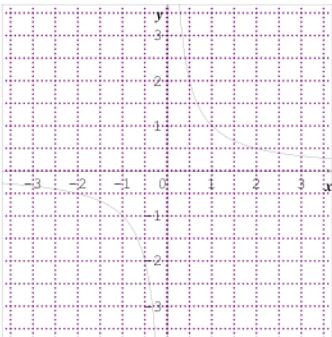
$$f(x) = |x|$$

Absolute value function  
(the absolute value of x)

$$\begin{cases} f(2) = 2 \\ f(-3) = 3 \end{cases}$$

$x$	$-\infty$	0	$+\infty$
$f(x)$		0	

And :  $f(-7)=7$

**Graph****Expression****Images****Table of variation**

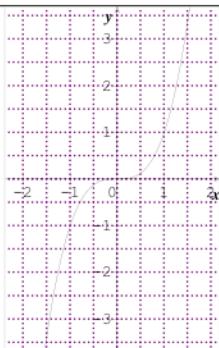
Hyperbola

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

Reciprocal function  
(1 over x)

$$\begin{cases} f(2) = \frac{1}{2} \\ f(-3) = -\frac{1}{3} \end{cases}$$

$x$	$-\infty$	0	$+\infty$
$f(x)$			

**Graph****Expression****Images****Table of variation**

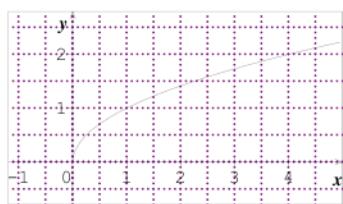
Symmetric about the origin

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

Cubic function  
(x cubed)

$$\begin{cases} f(2) = 8 \\ f(-3) = -27 \end{cases}$$

$x$	$-\infty$	0	$+\infty$
$f(x)$		0	

**Graph****Expression****Images****Table of variation**

Half parabola

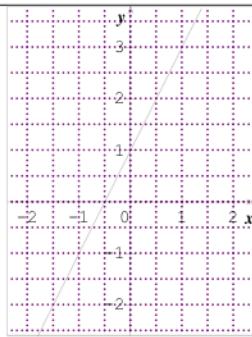
$$f(x) = \sqrt{x}$$

Square root function  
(the square root of x)

$$f(2) = \sqrt{2}$$

*f(-3) does not exist*

$x$	0	$+\infty$
$f(x)$	0	

**Graph****Expression****Images****Table of variation**

Straight line

$$f(x) = 2x + 1$$

Linear function

$$\begin{cases} f(2) = 5 \\ f(-3) = -5 \end{cases}$$

$x$	$-\infty$	$+\infty$
$f(x)$		

**6 families**

Square function

Absolute value function

Reciprocal function

Cubic function

Linear function

Square root function



6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



## 6 families



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6 families



6 families



6 families



6 families



6 families



6 families



6 families



6 families

