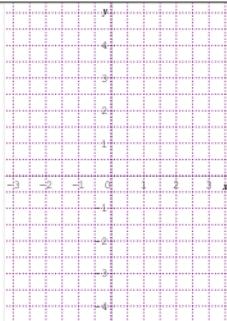


Graph

Parabola

Expression

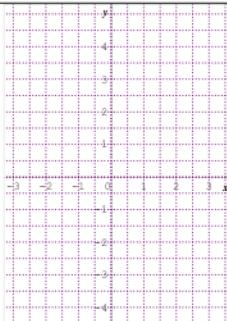
$$f(x) = x^2$$

Square function
(x squared)

Images

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

x	- ∞	0	+ ∞
$f(x)$			

And : $f(-7)=49$ **Table of variation****Images****Graph**

looks like a "V"

Expression

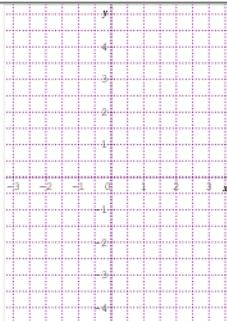
$$f(x) = |x|$$

Absolute value function
(the absolute value of x)

Images

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

x	- ∞	0	+ ∞
$f(x)$			

And : $f(-7)=7$ **Table of variation****Images****Graph**

Hyperbola

Expression

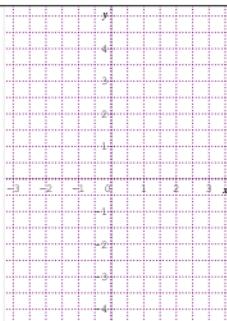
$$f(x) = \frac{1}{x}$$

Reciprocal function
(1 over x)

Images

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

x	- ∞	0	+ ∞
$f(x)$			

Graph

Symmetric about the origin

Expression

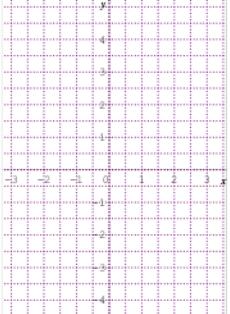
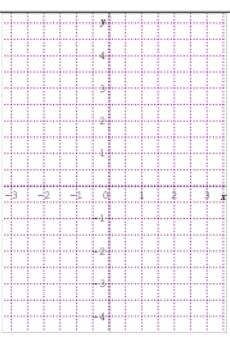
$$f(x) = x^3$$

Cubic function
(x cubed)

Images

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

x	- ∞	0	+ ∞
$f(x)$			

Graph	Expression	Images	Table of variation						
 Half parabola	$f(x) = \sqrt{x}$ Square root function (the square root of x)	$f(2) =$ $f(-3)$ does not exist	<table border="1"> <tr> <td>x</td><td>0</td><td>$+\infty$</td></tr> <tr> <td>$f(x)$</td><td></td><td></td></tr> </table>	x	0	$+\infty$	$f(x)$		
x	0	$+\infty$							
$f(x)$									
 Straight line	$f(x) = 2x + 1$ Linear function	$\begin{cases} f(2) = \\ f(-3) = \end{cases}$	<table border="1"> <tr> <td>x</td><td>$-\infty$</td><td>$+\infty$</td></tr> <tr> <td>$f(x)$</td><td></td><td></td></tr> </table>	x	$-\infty$	$+\infty$	$f(x)$		
x	$-\infty$	$+\infty$							
$f(x)$									

6 families

Square function
 Absolute value function
 Reciprocal function
 Cube function
 Linear function
 Square root function

