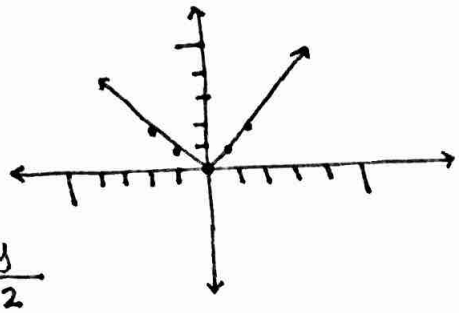
Absolute Value & Dilations

absolute value parent function

$y = |x|$ OR $f(x) = |x|$



x	y
-2	2
-1	1
0	0
1	1
2	2

dilations

- vertical : $y = a \cdot f(x)$

  ex. $y = 3(x)^2 \rightarrow$ V.D. by 3

  $f(x) = \frac{1}{2}x^2 \rightarrow$ V.D. by 1/2

  $|a| > 1$ taller graph

  $|a| < 1$ shorter/wider graph

- horizontal : $y = f\left(\frac{x}{b}\right)$

  ex. $y = \left(\frac{x}{2}\right)^2 \rightarrow$ H.D. by 2