

Parent

Function

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

$$f(x) = |x| + k$$

$$f(x) = -a|x|$$

① $f(x) = |x-h|$

②

$f(x)$

$D:$

③ f

ver

sta

④ f

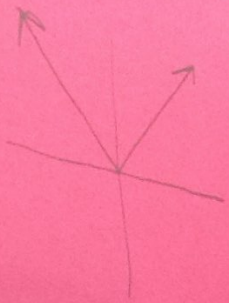
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$D:$

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

$$f(x) = a|x-h| + k$$



vertex $(0,0)$

$D: \mathbb{R}$

$R: y \geq \emptyset$

① vertex $(-4,0)$

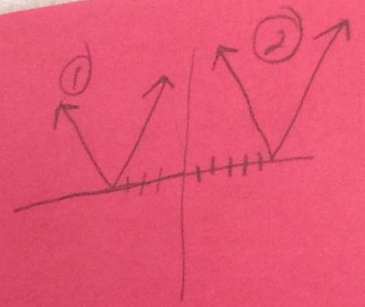
$$f(x) = |x+4|$$

$D: \mathbb{R}$ $R: y \geq \emptyset$

② vertex $(6,0)$

$$f(x) = |x-6|$$

$D: \mathbb{R}$ $R: y \geq \emptyset$



vertex $(0,2)$

$D: \mathbb{R}$

$R: y \geq 2$

vertex $(0,-3)$

$D: \mathbb{R}$

$R: y \geq -3$

① $f(x) = 3|x|$

vertex $(0,0)$

stretch

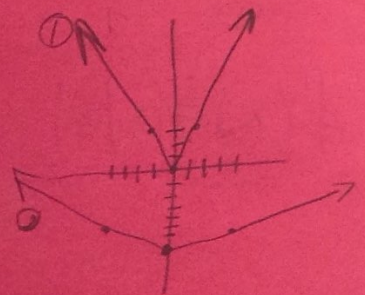
$D: \mathbb{R}$
 $R: y \geq \emptyset$

② $f(x) = \frac{1}{4}|x| - 7$

vertex $(0,-7)$

compression

$D: \mathbb{R}$ $R: y \geq -7$



vertex $(0,0)$

$D: \mathbb{R}$

$R: y \leq \emptyset$

