THE ABSOLUTE VALUE FUNCTION AND ITS TRANSLATIONS:

Parent function:	$y = |x|$
Vertical translations:	
Translation **up *k*** units ↑	$y = |x| + k$
Translation **down *k*** units ↓	$y = |x| - k$
Horizontal translations:	
Translation **right *h*** units ⟶	$y = |x - h|$
Translation **left *h*** units ⟵	$y = |x + h|$
Combined horizontal and vertical	$y = |x \pm h| \pm k$
Reflection in x-axis	$y = -|x|$
Stretch $a > 1$	$y = a|x|$
Shrink $0 < a < 1$	$y = a|x|$
Shrink/stretch with reflection	$y = -a|x|$
Vertex form of Absolute Value Function	$y = a|x - h| + k$ $vertex = (h, k)$