


Vertical & Horizontal Translations (1.1) *p13 day 1*

transformations
horizontal translations
vertical trans.
mappings
reflections
stretches
combining transformations
inverse of a function

recommended app



Free Graphing Calculator


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To create an echo for a sound wave, we need to copy the function 3 seconds into the future.

If the sound file is modeled by $y=f(x)$, then

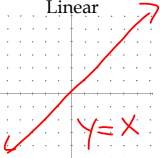
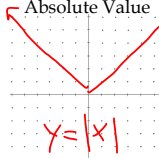
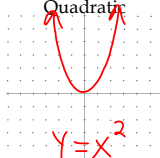
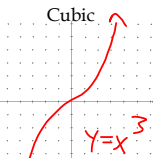
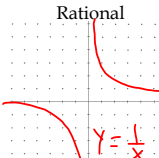
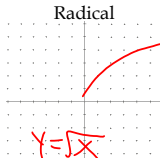
what will the new function be?
 $y=f(x-3) \rightarrow$

what mapping will copy the sound?
 $(x,y) \rightarrow (x+3,y)$



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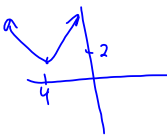
Let's review the 6 basic graphs:

<p>Linear</p>  <p>$y=x$</p>	<p>Absolute Value</p>  <p>$y= x$</p>	<p>Quadratic</p>  <p>$y=x^2$</p>
<p>Cubic</p>  <p>$y=x^3$</p>	<p>Rational</p>  <p>$y=\frac{1}{x}$</p>	<p>Radical</p>  <p>$y=\sqrt{x}$</p>

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ex1: The function $y=|x|$ is translated 4 units to the left and 2 up.

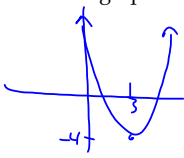
What is the new function?
 $y=|x+4|+2$



What are the Domain and Range?
 $D = x \in \mathbb{R}$
 $R = y \geq 2$

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ex2: Sketch a graph of $y=(x-3)^2-4$



3 right
4 down

$y=f(x-h)+k$

5, 6, 7

$y=\frac{1}{x}$

$y=\frac{1}{x+5}+4$

$y=f(x-2)^2+6$

$y=f(x)$
 $y=f(x+7)-12$

