DO NOW

ALGEBRA 1 · 5 MINUTES · START RIGHT AWAY

Lesson 10-4a # Vertical Translations

Name _____ Date _____ Per _____

1 FLUENCY

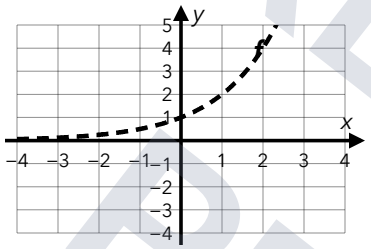
Compare $g(x) = \sqrt{x} - 3$ with the parent function $f(x) = \sqrt{x}$.

Starting point of g: (,)

Shift: **up** **down** **left** **right** units

2 VISUAL MODEL

$f(x) = 2^x$ is dashed. Graph $g(x) = 2^x - 3$ and its asymptote.



Asymptote of g:

$y =$

y-intercept of g:

3 APPLICATION

A ball kicked from the ground has height $h(t) = -16t^2 + 64t$ ft. The same kick from a 20-ft platform is $g(t) = h(t) + 20$. Find the maximum height of each kick.

h: ft g: ft

WORK

4 REASONING

A vertical translation of $f(x) = |x|$ changes the x-coordinate of the vertex. Always, sometimes, or never true? Explain.

Always **Sometimes** **Never**

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

Preview - the full worksheet and its answer key are at primeworksheet.com