

Writing the equation of transformed function from the graph.

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Pick out the key points for your tables for  $f(x)$  and  $g(x)$ .

$f(x)$	
x	y
-4	4
0	0
4	4

$g(x)$	
x	y
-8	10
-7	2
-6	10

\* pt (0,0) was not affected by horizontal stretch or vertical stretch.

$$\begin{aligned} h.t &= -7 \\ v.t &= 2 \end{aligned}$$

$$b(-4) - 7 = -8$$

$$-4b = -1$$

$$b = \frac{1}{4}$$

$$H.S = \frac{1}{4}$$

$$a(4) + 2 = 10$$

$$4a = 8$$

$$a = 2$$

$$v.S = 2$$

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

$$y = 2 f\left(\frac{1}{4}(x+7)\right) + 2$$