

WANT Transformation (3)



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Given: $f(x) = x^2$ find $g(x)$ where the function is ...

(1) Translated 2 units up

$$g(x) = x^2 + 2$$

The reflected over the y-axis

$$g(x) = -x^2$$

It is stretched by stretching by 2

$$g(x) = 2x^2$$

It is horizontally stretched by 2

$$g(x) = f\left(\frac{1}{2}x\right)$$

$$g(x) = \left(\frac{1}{2}x\right)^2$$

Given: $f(x) = x^2$ find $g(x)$ where the function is ...

(2) Translated 3 units down and 2 units right

$$g(x) = (x-2)^2 - 3$$

The reflected over the x-axis

$$g(x) = -\sqrt{x}$$

It is stretched by stretching by 4

$$g(x) = 4\sqrt{x}$$

It is horizontally stretched by 1/4

$$g(x) = f\left(\frac{1}{4}x\right)$$

It is stretched by stretching by 1/4

$$g(x) = \sqrt{\frac{1}{4}x}$$

(3) Translated 3 units up and right

$$g(x) = (x+3)^2$$

It is reflected over the y-axis

$$g(x) = (-x)^2$$

It is horizontally stretched by 2

$$g(x) = 0.5(x)^2$$

It is horizontally stretched by 1/2

$$g(x) = f\left(\frac{1}{2}x\right)$$

$$g(x) = \left(\frac{1}{2}x\right)^2$$

(4) Translated 3 units down and 2 units up

$$g(x) = (x+3)^2 - 5$$

It is stretched by stretching by 2

$$g(x) = \sqrt{2x}$$

It is stretched by stretching by 1/2

$$g(x) = \frac{1}{2}\sqrt{x}$$

It is stretched by stretching by 1/2

$$g(x) = \sqrt{\frac{1}{2}x}$$

(5) Translated 1 unit up and 2 units right

$$g(x) = (\sqrt{x} + 2)^2 - 1$$