



## Function Transformations (Domain/Range) - Double Transformation (Values) to Transformed Domain/Range

- 1 If the domain of  $f(x)$  is  $[a, b]$ , what is the domain of  $g(x)$ ?      2 If the range of  $f(x)$  is  $[a, b]$ , what is the range of  $g(x)$ ?

$$g(x) = f(4x) + 4$$

$$g(x) = -f(0.25x)$$

A  $\left[\frac{a}{4}, \frac{b}{4}\right]$

B  $[$

A  $\left[\frac{a}{0.25}, \frac{b}{0.25}\right]$

B  $[-b, -a]$

C  $\left[\frac{-b}{0.25}, \frac{-a}{0.25}\right]$

- 3 If the range of  $f(x)$  is  $[a, b]$ , what is the range of  $g(x)$ ?

$$g(x) = 0.25f(x - 5)$$

- 4 If the domain of  $f(x)$  is  $[a, b]$ , what is the domain of  $g(x)$ ?

$$g(x) = -f(-x)$$

A  $[a + 5, b + 5]$

B  $[0.25 \cdot a, 0.25 \cdot b]$

C  $\left[\frac{a+5}{0.25}, \frac{b+5}{0.25}\right]$

A

$$[$$

B

$$[-b, -a]$$

- 5 If the domain of  $f(x)$  is  $[a, b]$ , what is the domain of  $g(x)$ ?

$$g(x) = f(-0.25x)$$

- 6 If the range of  $f(x)$  is  $[a, b]$ , what is the range of  $g(x)$ ?

$$g(x) = 5f(x) + 4$$

A  $[$

B  $\left[\frac{-b}{0.25}, \frac{-a}{0.25}\right]$

A  $[5 \cdot a + 4, 5 \cdot b + 4]$

B  $\left[\frac{a}{5}, \frac{b}{5}\right]$

C  $[a, b]$

- 7 If the domain of  $f(x)$  is  $[a, b]$ , what is the domain of  $g(x)$ ?

$$g(x) = f(-x) + 5$$

- 8 If the domain of  $f(x)$  is  $[a, b]$ , what is the domain of  $g(x)$ ?

$$g(x) = 0.25f(-x)$$

A  $[-b, -a]$

B  $[$

A  $[-b, -a]$

B  $[$