



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

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

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

- A $[a - q, b - q]$ B $[-q - b, -q - a]$
 C $[q - b, q - a]$

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

$$g(x) = f(r \cdot x + n)$$

- A $[\frac{a+n}{r}, \frac{b+n}{r}]$ B $[a - n, b - n]$
 C $[\frac{a-n}{r}, \frac{b-n}{r}]$

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

$$g(x) = f(w \cdot x + m)$$

- A $[\frac{a-m}{w}, \frac{b-m}{w}]$ B $[a - m, b - m]$

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

$$g(x) = t \cdot f(x) - q$$

- A $[a - q, b - q]$ B $[t \cdot a - q, t \cdot b - q]$
 C $[t \cdot a + q, t \cdot b + q]$

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

$$g(x) = -f(w \cdot x)$$

- A $[a, b]$ B $[\frac{-b}{w}, \frac{-a}{w}]$ C $[\frac{a}{w}, \frac{b}{w}]$

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

$$g(x) = -r \cdot f(x)$$

- A $[r \cdot a, r \cdot b]$ B $[-b, -a]$
 C $[-r \cdot b, -r \cdot a]$

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

$$g(x) = -w \cdot f(x)$$

- A $[w \cdot a, w \cdot b]$ B $[-w \cdot b, -w \cdot a]$

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

$$g(x) = q \cdot f(-x)$$

- A $[-q \cdot b, -q \cdot a]$ B $[a, b]$
 C $[q \cdot a, q \cdot b]$