



Function Transformations (Definition) - Double Transformation (Values) to Definition

1 What does this transformation produce in $f(x)$?

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

- | | | | |
|---|------------------------------------|---|------------------------------------|
| A | Reflect in Y-Axis
Shift up: 4 | B | Reflect in Y-Axis
Shift down: 4 |
| C | Reflect in X-Axis
Shift down: 4 | | |

2 What does this transformation produce in $f(x)$?

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

- | | | | |
|---|-------------------|---|--|
| A | Reflect in Y-Axis | B | Reflect in Y-Axis
Reflect in X-Axis |
| C | Reflect in X-Axis | | |

3 What does this transformation produce in $f(x)$?

$$g(x) = f(-x + 2)$$

- | | | | |
|---|-------------------------------------|---|------------------------------------|
| A | Reflect in X-Axis
Shift left: 2 | B | Reflect in Y-Axis
Shift left: 2 |
| C | Reflect in Y-Axis
Shift right: 2 | | |

4 What does this transformation produce in $f(x)$?

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

- | | | | |
|---|--|---|--|
| A | Reflect in X-Axis
Vertical compression: 2 | B | Reflect in Y-Axis
Vertical stretch: 2 |
| C | Reflect in X-Axis
Vertical stretch: 2 | | |

5 What does this transformation produce in $f(x)$?

$$g(x) = f(x + 2) - 2$$

- | | | | | | |
|---|--------------------------------|---|---------------------------------|---|------------------------------|
| A | Shift left: 2
Shift down: 2 | B | Shift right: 2
Shift down: 2 | C | Shift left: 2
Shift up: 2 |
|---|--------------------------------|---|---------------------------------|---|------------------------------|

6 What does this transformation produce in $f(x)$?

$$g(x) = 0.33f(x + 3)$$

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|---|---|---|---|
| A | Vertical stretch: 0.33
Shift left: 3 | B | Horizontal compression: 0.33
Shift left: 3 |
| C | Vertical compression: 0.33
Shift left: 3 | | |

7 What does this transformation produce in $f(x)$?

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

- | | | | |
|---|-------------------------------------|---|------------------------------------|
| A | Reflect in Y-Axis
Shift right: 2 | B | Reflect in Y-Axis
Shift left: 2 |
| C | Reflect in Y-Axis
Shift up: 2 | | |

8 What does this transformation produce in $f(x)$?

$$g(x) = f(0.33x + 4)$$

- | | | | |
|---|--|---|---|
| A | Horizontal stretch: 0.33
Shift left: 4 | B | Vertical stretch: 0.33
Shift left: 4 |
| C | Horizontal stretch: 0.33
Shift right: 4 | | |