MATH 30-1, TRANSFORMATIONS, OPERATIONS & INVERSE FUNCTIONS, 5 QUESTIONS · 5 QUESTIONS

# Transformations, Operations & Inverse Functions — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

**1** **The point (3, -7) lies on the graph of y = f(x). The image of this point on the graph of y = f(x - 2) + 5 is**

- A (5, -2)
- B (1, -2)
- C (5, -12)
- D (1, -12)

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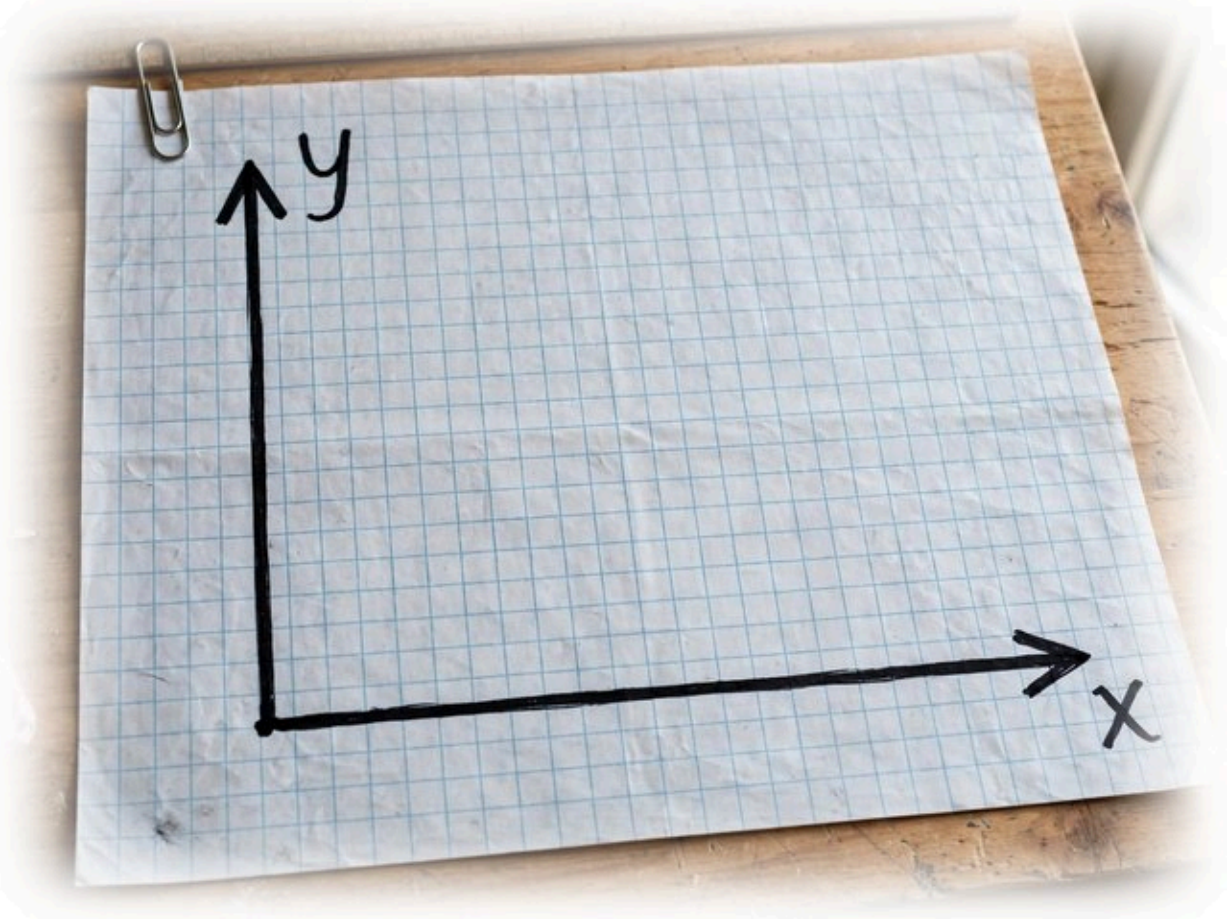
**2** **A coordinate grid with bold x and y axes on graph paper. Compared to the graph of y = f(x), the graph of y = 3f(x - 1) has been**




A horizontally stretched by a factor of 3 and translated 1 unit to the left

B vertically stretched by a factor of 3 and translated 1 unit to the right

C vertically stretched by a factor of $\frac{1}{3}$ and translated 1 unit to the right

D vertically stretched by a factor of 3 and translated 1 unit to the left

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**3** **Given $f(x) = 4x + 1$ and $g(x) = x^2$, the value of $(g \circ f)(1)$ is**

ANSWER _____

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**4** **The inverse of the function $f(x) = 3x - 9$ is**

A $f^{-1}(x) = \frac{x - 9}{3}$

B $f^{-1}(x) = \frac{x + 9}{3}$

C $f^{-1}(x) = 3x + 9$

D $f^{-1}(x) = \frac{x}{3} - 9$

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5 The range of $y = f(x)$ is $0 \leq y \leq 8$. The range of $y = \frac{1}{2}f(x) - 3$ is

A $0 \leq y \leq 8$

B $-3 \leq y \leq 5$

C $-6 \leq y \leq 2$

D $-3 \leq y \leq 1$

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## ANSWER KEY

1. A
2. B
3. 25
4. B
5. D

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