

Circle the correct partial differential equation for the function below.

1) Transformed 1 unit down

$$f(x) = 4^{-x} - 1$$

2) Reflected over the x-axis

$$f(x) = -4^{-x}$$

$$f(x) = -4^{-x}$$

3) Vertically stretched by 4

$$f(x) = 4(4^{-x})$$

4) Vertically stretched by 2

$$f(x) = 4\sqrt[4]{4^{-x}}$$

5) Transformed 1 unit to the left

$$f(x) = 4^{-(x+1)}$$

6) Reflected over the y-axis

$$f(x) = 4^{-(x-1)}$$

7) Vertically compressed by $\frac{1}{4}$

$$f(x) = \frac{1}{4}(4^{-x})$$

8) Vertically compressed by $\frac{1}{2}$

$$f(x) = \sqrt[2]{4^{-x}}$$

Circle the correct partial differential equation for the function below.

1) Transformed 3 units down and 1 unit right

$$f(x) = 4 \log_4(x+1) - 3$$

2) Reflected over the x-axis

$$f(x) = -4 \log_4 x$$

3) Vertically stretched by 4

$$f(x) = 4 \log_4 x$$

4) Vertically stretched by 2

$$f(x) = 2 \log_4(x^2)$$

5) Vertically compressed by $\frac{1}{2}$

$$f(x) = \frac{1}{2} \log_4(x^2)$$

6) Transformed 3 units to the left and 1 unit up

$$f(x) = 4 \log_4(x-1) + 3$$

7) Vertically stretched by 4

$$f(x) = 4 \log_4(x-1)$$

8) Vertically stretched by $\frac{1}{2}$

$$f(x) = \frac{1}{2} \log_4(x^2)$$

9) Vertically stretched by $\frac{1}{2}$

$$f(x) = \frac{1}{2} \log_4(x^2)$$

10) Transformed 3 units to the left and 1 unit down

$$f(x) = 4 \log_4(x+1) - 3$$