

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 2

$$f(x) = 2(4^{-x})$$

4) Vertically compressed by 2

$$f(x) = 4^{\frac{1}{2}x}$$

2) Transformed 1 unit to the left

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

4) Reflected over the y-axis

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

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

$$f(x) = \frac{1}{2}(4^{-x})$$

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

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

Circle the correct partial differential equation for the function below.

1) Transformed 3 units down and 1 unit right

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

2) Reflected over the x-axis

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

3) Vertically stretched by 4

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

4) Vertically compressed by 2

$$f(x) = 4 \log_4(2^{-x})$$

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

$$f(x) = 2 + 2 \log_4(2^{-x})$$

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

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

4) Vertically stretched by 4

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

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

$$f(x) = \frac{1}{2} + 4 \log_4 x$$

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

$$f(x) = 4 \log_4(2^{-x})$$

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

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