

Circle the correct partial differential equation for the function below.

1) Transformed 1 unit down

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

2) Reflected over the x-axis

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

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

3) Vertically stretched by 1

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

4) Vertically stretched by 2

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

5) Transformed 1 unit to the left

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

6) Reflected over the y-axis

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

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

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

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

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

Circle the correct partial differential equation for the function below.

1) Transformed 3 units down and 1 unit right

$$f(x) = 4 \log_4(x^2 - 3) - 1$$

2) Reflected over the x-axis

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

3) Vertically stretched by 4

$$f(x) = 4 \log_4(x^2)$$

4) Vertically stretched by 2

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

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

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

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

$$f(x) = 4 \log_4(x^2 + 3) + 1$$

7) Vertically stretched by 2

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

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

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

9) Vertically stretched by $\frac{1}{4}$

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

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

$$f(x) = 4 \log_4(x^2 - 3) - 1$$