

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 1

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

4) Vertically stretched by 2

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

5) Transformed 1 unit to the left

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

6) Reflected over the y-axis

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

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

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

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

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

Circle the correct partial differential equation for the function below.

1) Transformed 3 units down and vertically

$$f(x) = 4 \cos_2(x - \pi) - 3$$

2) Reflected over the x-axis

$$f(x) = -4 \cos_2 x$$

3) Vertically stretched by 4

$$f(x) = 4 \cos_2 x$$

4) Vertically stretched by 2

$$f(x) = 2 \cos_2(2^x)$$

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

$$f(x) = \frac{1}{2} \cos_2(\frac{1}{2}x)$$

6) Transformed 3 units to the left and vertically

$$f(x) = 4 \cos_2(x + \pi) + 3$$

7) Vertically stretched by 4

$$f(x) = 4 \cos_2(-x)$$

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

$$f(x) = \frac{1}{2} 4 \cos_2 x$$

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

$$f(x) = \frac{1}{4} \cos_2(x)$$

10) Transformed 3 units to the left and vertically

$$f(x) = 4 \cos_2(x - \pi) + 3$$