

Circle the correct partial differential equation for the function below.

1) Transformed 1 into 2 only

$$f(x,y) = 4^x - 2^y$$

2) reflected over the x-axis

$$f(x,y) = -(4^x)$$

$$f(x,y) = -4^x$$

3) vertically stretched by 2

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

4) horizontally stretched by 2

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

5) Transformed 1 into 2 and 3 only

$$f(x,y) = 4^x - 2^y + 2$$

6) reflected over the y-axis

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

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

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

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

$$f(x,y) = 4^{\sqrt{2}x}$$

Circle the correct partial differential equation for the function below.

1) Transformed 1 into 2 and 3 only

$$f(x,y) = 4 \cos_2(x^2 - 2^y) + 3$$

2) reflected over the x-axis

$$f(x,y) = -4 \cos_2 2^x$$

3) vertically stretched by 2

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

4) horizontally stretched by 2

$$f(x,y) = 4 \cos_2(\sqrt{2}^x)$$

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

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

6) Transformed 1 into 2 and 3 and 4 only

$$f(x,y) = 2 \cos_2(x^2 + 2^y) + 5$$

7) vertically stretched by 2

$$f(x,y) = 4 \cos_2(x^2)$$

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

$$f(x,y) = \frac{2}{4} + \cos_2 2^x$$

9) horizontally compressed by  $\frac{1}{2}$

$$f(x,y) = \cos_2(\sqrt{2}^x)$$

10) Transformed 1 into 2 and 3 only and 4

$$f(x,y) = 4 \cos_2(x^2 - 2^y) + 2$$