

Circle the correct partial differential equation for the function below.

1) Transformed 1 into 2 only

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

2) reflected into the x-axis

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

3) vertically stretched by 2

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

4) vertically compressed by 2

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

5) Transformed 1 into 2 and the axes

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

6) reflected into the y-axis

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

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

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

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

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

Circle the correct partial differential equation for the function below.

1) Transformed 1 into 2 and 3 vertically

$$f(x,y) = 4xy^2(x^2 - y^2) - 3x$$

2) reflected into the x-axis

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

3) vertically stretched by 2

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

4) vertically compressed by 2

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

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

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

6) Transformed 1 into 2 and 3 vertically

$$f(x,y) = 4xy^2(x^2 - y^2) + 5$$

7) vertically stretched by 2

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

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

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

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

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

10) Transformed 1 into 2 and 3 vertically

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