

Partial Derivatives Practice

Name _____

Date 9/11/2026

Hold the other variable constant, differentiate with respect to the requested variable, then substitute the point.

For $f(x,y) = 5x^2y + 2xy^2$, find $f_y(4, -4)$.

For $f(x,y) = 1x^2y + 6xy^2$, find $f_y(-3, -3)$.

1.

4.

For $f(x,y) = -4x^2y - 6xy^2$, find $f_x(3, -3)$.

For $f(x,y) = -2x^2y - 3xy^2$, find $f_y(1, -3)$.

2.

5.

For $f(x,y) = 6x^2y + 2xy^2$, find $f_y(-4, -2)$.

For $f(x,y) = -5x^2y + 4xy^2$, find $f_x(2, -5)$.

3.

6.

Partial Derivatives Practice — Answer Key

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Hold the other variable constant, differentiate with respect to the requested variable, then substitute the point.

For $f(x,y) = 5x^2y + 2xy^2$, find $f_y(4, -4)$.

For $f(x,y) = 1x^2y + 6xy^2$, find $f_y(-3, -3)$.

1.

Answer: 16

4.

Answer: 117

For $f(x,y) = -4x^2y - 6xy^2$, find $f_x(3, -3)$.

For $f(x,y) = -2x^2y - 3xy^2$, find $f_y(1, -3)$.

2.

Answer: 18

5.

Answer: 16

For $f(x,y) = 6x^2y + 2xy^2$, find $f_y(-4, -2)$.

For $f(x,y) = -5x^2y + 4xy^2$, find $f_x(2, -5)$.

3.

Answer: 128

6.

Answer: 200