

This print-out should have 1 questions. Multiple-choice questions may continue on the next column or page – find all choices before answering. The due time is Central time.

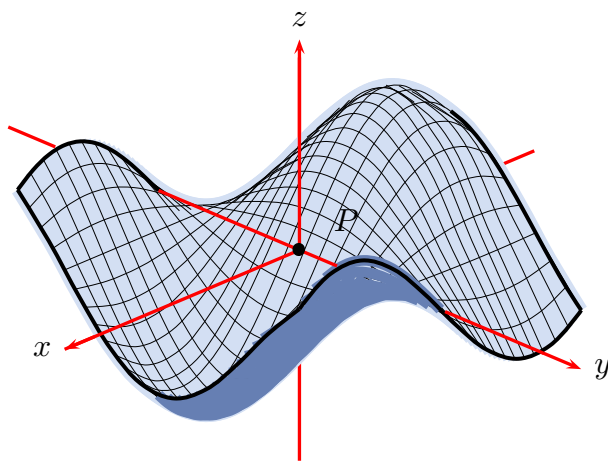
keywords: graph, partial derivative, graphical interpretation, slope

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59:03, calculus3, multiple choice, < 1 min, .

001

For the function f whose graph is



determine the sign of f_x and f_y at P .

1. $f_x < 0$, $f_y = 0$ **correct**
2. $f_x < 0$, $f_y > 0$
3. $f_x = 0$, $f_y = 0$
4. $f_x = 0$, $f_y > 0$
5. $f_x > 0$, $f_y < 0$
6. $f_x > 0$, $f_y < 0$

Explanation:

The partial derivative f_x give the slope of the graph in the direction of increasing x , while f_y gives the slope in the direction of increasing y . But at P the graph slopes down in the positive x -direction, while the graph is horizontal in the y -direction. Consequently,

$$\boxed{f_x < 0, \quad f_y = 0}.$$