

Tangent Planes and Linear Approximation



Question

For a particular function $f(x, y)$, the equation of the tangent plane at the point $(1, 2)$ has the form

$$z - 7 = f_x(1, 2)(x - 1) + f_y(1, 2)(y - 2).$$

Which of the following vectors is normal to the plane?

- A. $\langle 1, f_x(1, 2), f_y(1, 2) \rangle$
- B. $\langle f_x(1, 2), f_y(1, 2), -1 \rangle$
- C. $\langle f_x(1, 2), f_y(1, 2), 1 \rangle$
- D. $\langle -f_x(1, 2), -f_y(1, 2), 1 \rangle$
- E. More than one of the above.