Tangent Planes and Linear Approximation

Question

For a particular function, $f(2,3) = -1$, $f_x(2,3) = 5$, and $f_y(2,3) = -7$. Which of the following approximations of f is valid near $(2,3)$?

A. $f(x,y) \approx -1 + 5(x-2) - 7(y-3)$

B. $f(x,y) \approx 5(x-2) - 7(y-3)$

C. $f(x,y) \approx -1 + 5x - 7y$

D. $f(x,y) \approx 5x - 7y$