Tangents and Normals

$f(x) = x^3 - 3x^2$ $(1, -2)$

$f'(x) = 3x^2 - 6x$

$f'(1) = 3(1)^2 - 6(1)$

$= 3 - 6$

$= -3$

$y + 2 = -3(x - 1)$

$y + 3x = 1$

$= 1/3$ $(1, -2)$

$y + 2 = \frac{1}{3}(x - 1)$

$3y - x = -7$