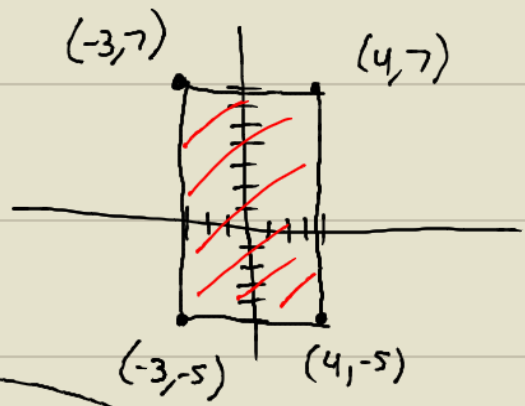


$$6. f(x,y) = 4x^2 - 5xy + y^5$$

$$f_x = 8x - 5y$$

$$f_y = -5x + 5y^4$$



$$S = \int_{x=-3}^4 \int_{y=-5}^7 \sqrt{1 + (8x - 5y)^2 + (-5x + 5y^4)^2} \, dy \, dx$$