

OK, smarty pants!

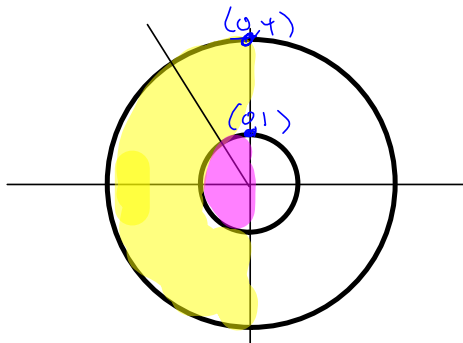
See D2L shell

"Everything" is smooth & cont^s on its domain, This means, unless something cooks up something pathological.

$\lim_{(x,y) \rightarrow (5,2)} f(x,y) = f(5,2)$, 99/100 times!

$\lim_{(x,y) \rightarrow (0,0)} \frac{\text{STUFF}}{x^2+y^2}$ would.

$$\iint_R (x+y) dA \quad R = \{ \text{yellow region} \}$$



$$1 \leq r \leq 4$$

$$\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}$$

$$x = r \cos \theta$$

$$y = r \sin \theta$$

$$dA = r dr d\theta$$

$$\int_{\frac{\pi}{2}}^{\frac{3\pi}{2}} \int_1^4 (r \cos \theta + r \sin \theta) r dr d\theta$$

$$= -42, \text{ obviously.}$$

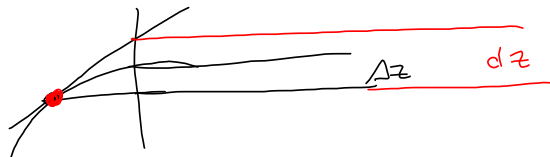
$$y - y_0 = m(x - x_0)$$

$$y = m(x - x_0) + y_0$$

$$(z - z_0) = f_x(x - x_0) + f_y(y - y_0)$$

$z = f_x(x - x_0) + f_y(y - y_0)$ where z is viewed as two independent variables.

#52 from Test Video/Notes



$$x^2 + y^2 = 9$$

$$y^2 = 9 - x^2$$

$$y = \pm \sqrt{9 - x^2}$$

