

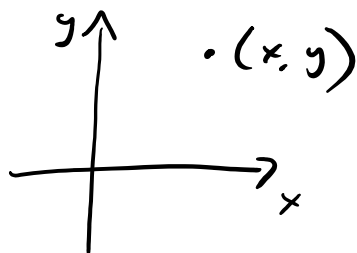
Section 29.4: Supplement

Monday, January 30, 2017 1:46 PM

Cylindrical Coordinates

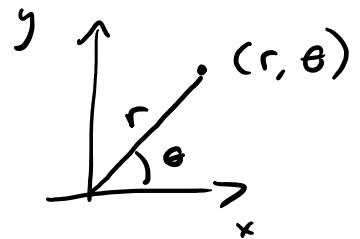
optional: (but sometimes makes the integral much easier)

rectangular coords



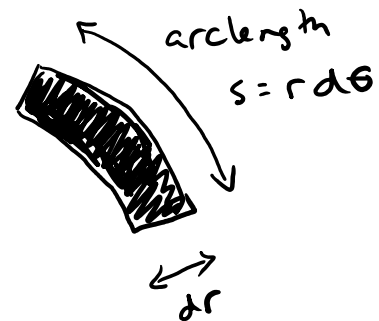
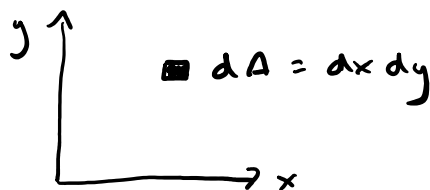
$$x = r \cos \theta$$
$$y = r \sin \theta$$

polar coords:



$$r = \sqrt{x^2 + y^2}$$
$$\tan \theta = y/x$$

what about integrals?



$$dA = (r d\theta) dr$$

$$= \dot{r} dr d\theta$$