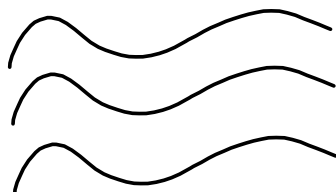


Questions about 9.2?

A paucity of exercises.

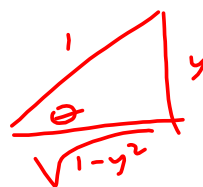
$$F(x) + C$$



$$y' = 2x\sqrt{1-y^2} = \frac{dy}{dx}$$

$$2x dx = \frac{dy}{\sqrt{1-y^2}}$$

$$\int 2x dx = \int \frac{dy}{\sqrt{1-y^2}}$$



$$y = \sin \theta$$

$$dy = \cos \theta d\theta$$

$$x^2 + C = \int \frac{\cos \theta d\theta}{|\cos \theta|}$$

$$\sqrt{1-\sin^2 \theta} = |\cos \theta|$$

$$= \int d\theta \text{ if you assume } \cos \theta > 0$$

$$= \theta = \arcsin(y)$$

$$\arcsin(y) = x^2 + C$$

$$\sin(\quad) = y = \sin(x^2 + C)$$

$$= \sin(x^2) \cos(C) + \cos(x^2) \sin(C)$$

$$= C_1 \sin(x^2) + C_2 \cos(x^2)$$

This may  
or may NOT  
be better than  
the books

$$\arcsin(y) = x^2 + C$$