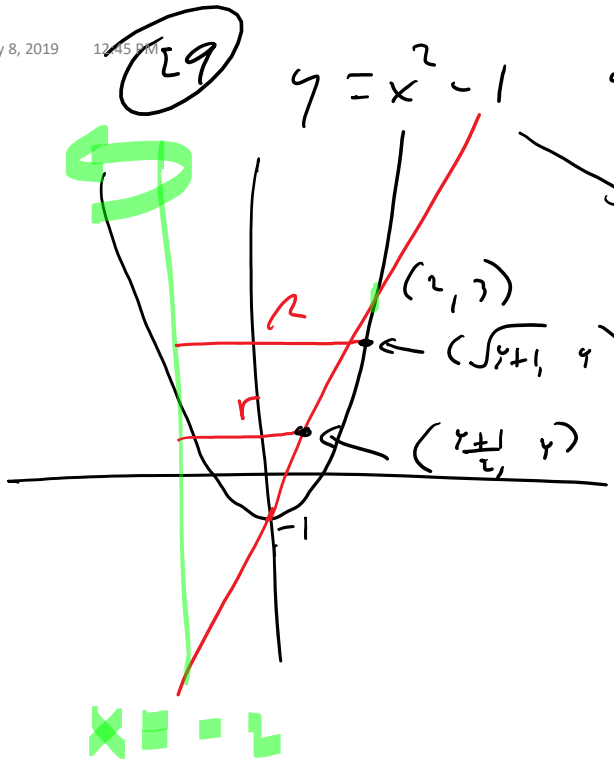


$$x + y = 1$$

$$x = 1 - y$$

$$r = \frac{1 - y}{2}$$

$$\frac{1}{2} \pi \int_0^1 \left(\frac{1-y}{2}\right)^2 dy$$



$$y = x^2 - 1$$

$$y = 2x - 1$$

$$y + 1 = x^2$$

$$x = \sqrt{y+1}$$

$$x = -2$$

$$r = \sqrt{y+1} + 2$$

$$y + 1 = 2x$$

$$x = \frac{y+1}{2}$$

$$\pi \int_{-1}^3 (\sqrt{y+1} + 2)^2 - \left(\frac{y+1}{2} + 2\right)^2 dy$$

-1

(15) B

$$(16) f'' = 12x^3 - 36x^2 = 12x^2(x-3) = 0$$

$x=3$

$$(17) \frac{1}{2} \int_4^6 \frac{1}{x} dx = \frac{1}{2} \ln x \Big|_4^6 \quad \text{(A)}$$
$$= \frac{1}{2} (\ln 6 - \ln 4) = \frac{1}{2} \ln \frac{6}{4} = \frac{1}{2} \ln \frac{3}{2}$$

(C)