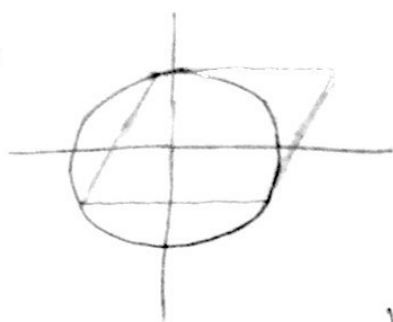


b) same ... with squares

\*



$$A = s^2$$

$$s = 2\sqrt{1-y^2}$$

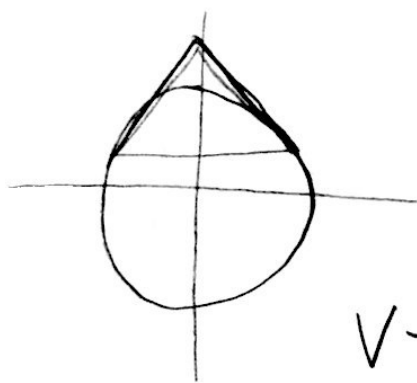
$$V = \int_{-1}^1 (2\sqrt{1-y^2})^2 dy$$

$$V = 2 \cdot 4 \int_0^1 (1-y^2) dy$$

$$= 8 \left( y - \frac{y^3}{3} \Big|_0^1 \right)$$

$$= 8 \left( 1 - \frac{1}{3} \right) = 8 \cdot \frac{2}{3} = \frac{16}{3}$$

~~c)~~ same ... with equilateral  $\Delta s$



$$A = \frac{s^2 \sqrt{3}}{4}$$

$$s = 2\sqrt{1-y^2}$$

$$V = \frac{\sqrt{3}}{4} \int_{-1}^1 4(1-y^2) dy$$

$$= 2\sqrt{3} \int_0^1 (1-y^2) dy = 2\sqrt{3} \cdot \left( y - \frac{y^3}{3} \Big|_0^1 \right)$$