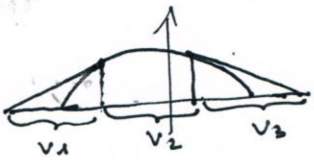
ג

החצי העליון של המעגל: $y=\sqrt{5-x^2}$

$y'=\frac{-2x}{2\sqrt{5-x^2}}=\frac{-x}{\sqrt{5-x^2}}$

$y'(2)=\frac{-2}{1}\longrightarrow y=-2x+5$ משוואות המשיק בנק' $(2,1)$:

$y'(-2)=\frac{2}{1}\longrightarrow y=2x+5$ " " $(-2,1)$:



$$V_1=\pi\int_{-2.5}^{-2}(2x+5)^2dx=\pi\frac{(2x+5)^3}{3\cdot 2}\Big|_{-2.5}^{-2}=$$

$$=\frac{1}{6}\pi$$

$$V_2=\pi\int_{-2}^{2}(5-x^2)dx=\left(5x-\frac{x^3}{3}\Big|_{-2}^{2}\right)\pi=$$

$$=\pi\left[\left(10-\frac{8}{3}\right)-\left(-10+\frac{8}{3}\right)\right]=\left(20-5\tfrac{1}{3}\right)\pi=14\tfrac{2}{3}\pi$$

$$V_3=V_1=\frac{1}{6}\pi$$

$$V_1+V_2+V_3=15\pi$$