

$$\begin{aligned}
 y &= -\sin x & D \\
 y^{(1)} &= -\cos x \\
 y^{(2)} &= \sin x \\
 y^{(3)} &= \cos x \leftarrow \\
 y^{(4)} &= -\sin x \\
 y^{(5)} &= -\cos x \\
 y^{(6)} &= \sin x \\
 y^{(7)} &= \cos x \leftarrow
 \end{aligned}$$

$$f \cdot g = f \cdot g' + g \cdot f'$$

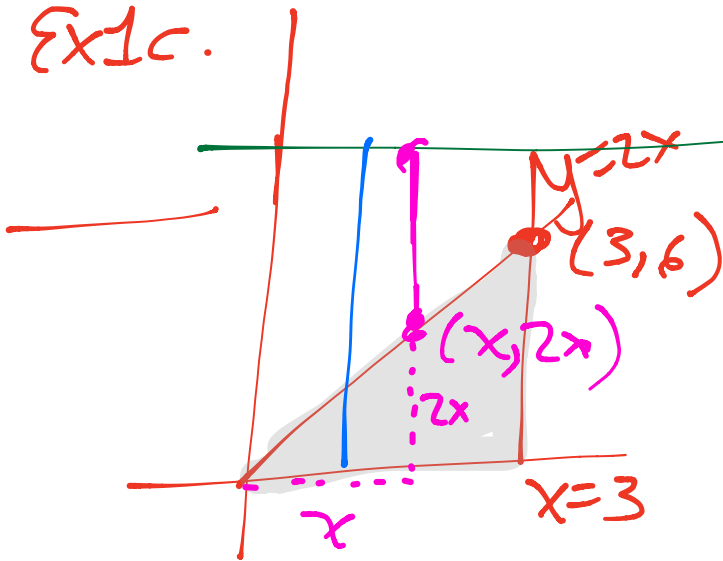
$$7 \cdot -1 + -4 \cdot \frac{3}{2}$$

$$-7 + -6$$

$$-13$$

\boxed{C}

Ex 1c.



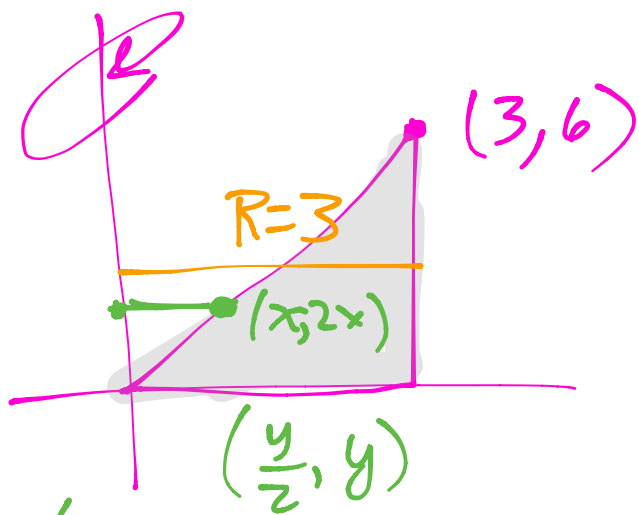
$$y = 8$$

$$R = 8$$

$$r = 8 - 2x$$

$$\int (\pi R^2 - \pi r^2) dx$$

$$\pi \int_0^3 [8^2 - (8-2x)^2] dx = 108\pi$$



$$y = 2x$$

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

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

$$\pi \int_0^6 \left(3^2 - \left(\frac{y}{2} \right)^2 \right) dy = 36\pi$$

f. $R = 4 - \frac{x}{2}$ $r = 1$

$$V = \pi \int_0^6 \left(\left(4 - \frac{x}{2} \right)^2 - 1^2 \right) dx = 36\pi$$

Ex. 2

a) $R = x - 1$ $r = 0$ $\frac{8\pi}{3}$

b) $R = 2$ $r = 2 - (x - 1)$ $\frac{16\pi}{3}$

c) $R = 3$ $r = 3 - (x - 1)$ $\frac{28\pi}{3}$

d) $R = 3$ $r = y + 1$ $\frac{28\pi}{3}$

e) $R = 3 - (y + 1)$ $r = 0$ $\frac{8\pi}{3}$

f) $R = 5 - (y + 1)$ $r = 2$ $\frac{32\pi}{3}$

Finish exs. 3-10