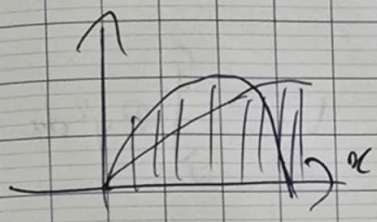
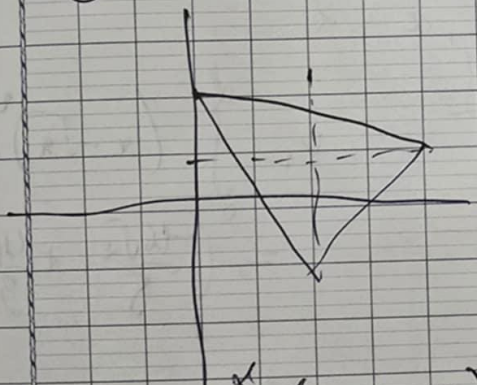
Ngày ..... Tháng ..... Năm.....

d) $y = \sin x$, $y = \sin 2x$ $x = 0$, $x = \frac{\pi}{2}$



②



$d_1 : y = \frac{-4}{5}x + 5$

$d_2 : y = x - 4$

$d_3 : y = \frac{-7x}{\alpha} + 5$

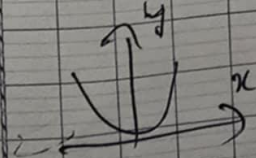
$$S = \int_0^{\alpha} \left(\frac{-4}{5}x + 5\right) - \left(\frac{-7}{\alpha}x + 5\right) dx$$

$$+ \int_{\alpha}^{5} \left(\frac{-4}{5}x + 5\right) - (x - 4)\, dx$$

$$= \frac{\alpha^2}{2}$$

③

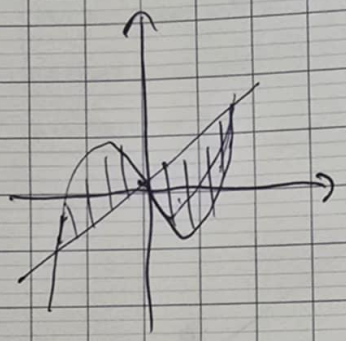
a) $y = x^2$ $0 \le x \le 2$ $y = 4$ $x = 0$



$$V = \int_0^4 \pi x^2 dy = 8\pi$$

①

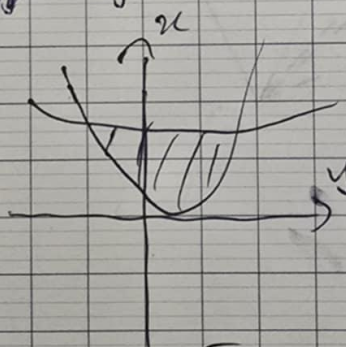
a) $y = x^3 - x$, $y = 3x$



$$S = \int_{-2}^{0} (x^3 - x - 3x)\,dx + \int_{0}^{2} (3x - x^3 + x)\,dx$$

$$= 8$$

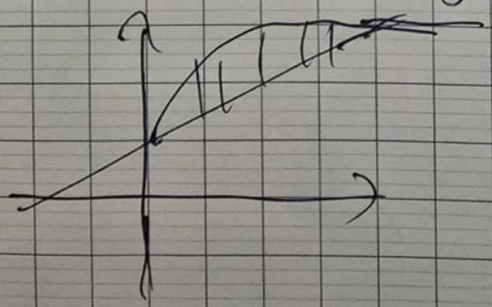
b) $y^2 = 2x^2$, $x = 9 + y^2$



$$S = \int_{-2}^{2} (y^2 + 9 - 2y^2)\,dx$$

$$= \frac{32}{3}$$

c) $y = 1 + \sqrt{x}$, $y = \frac{3+x}{3}$

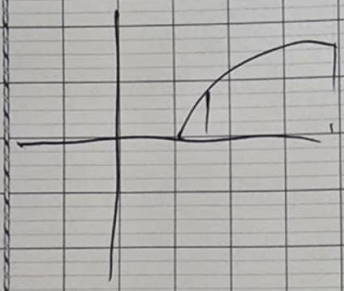


$$S = \int_{0}^{9} 1 + \sqrt{x} - \frac{3+x}{3}\,dx$$

$$= \frac{9}{2}$$

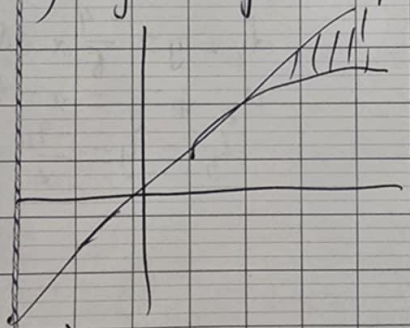
Ngày ..... Tháng ..... Năm.....

b) $y = \sqrt{x-1}$, $y = 0$, $x = 2$ $x = 5$



$$V = \int_2^5 \pi y^2 dx = \frac{15}{2}\pi$$

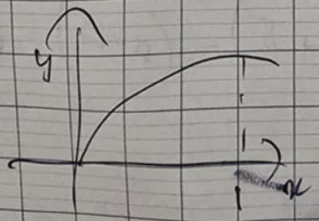
c) $y = x$ $y = \sqrt{x}$, $x = 2$



$$V = \int_0^2 \left(x - \sqrt{x}\right)^2 \pi \, dy$$

$$= \left(\frac{16\sqrt{2}}{5} + \frac{4}{3}\right)\pi$$

d) $y = x^2/3 \Rightarrow x = y^{3/2}$



$$V = \int_2^9 \left(1 - y^{3/2}\right)^2 \pi \, dy$$

$$= \frac{9}{20}$$