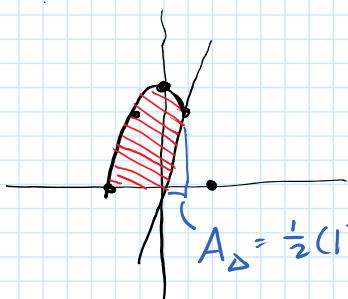


(36)  $y = 4 - x^2$   $y = 3x$

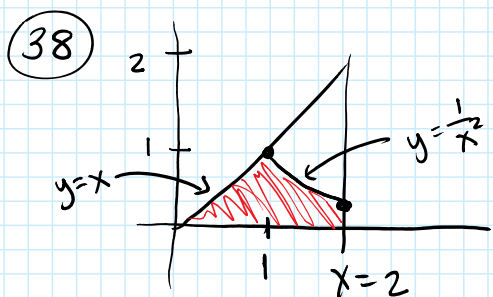


$$A = \int_{-2}^1 (4 - x^2) dx - A_{\Delta}$$

$$= (4x - \frac{1}{3}x^3) \Big|_{-2}^1 - \frac{3}{2}$$

$$= 4(1) - \frac{1}{3}(1)^3 - 4(-2) + \frac{1}{3}(-2)^3 - \frac{3}{2}$$

$$= 4 - \frac{1}{3} + 8 - \frac{8}{3} - \frac{3}{2} = \boxed{7.5}$$

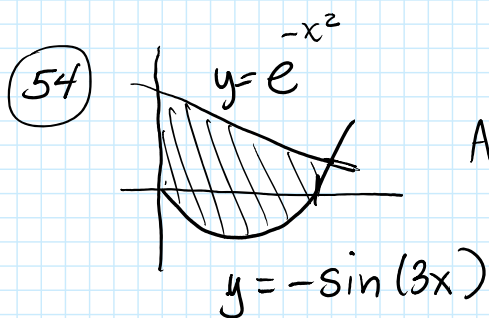


$$A = \int_0^1 x dx + \int_1^2 \frac{1}{x^2} dx$$

$$= \frac{1}{2}x^2 \Big|_0^1 + \left. -\frac{1}{x} \right|_1^2$$

$$= \frac{1}{2}(1)^2 - \frac{1}{2}(0)^2 + \left. -\frac{1}{2} \right|_1^2 - \left. -\frac{1}{1} \right|_1^2$$

$$= \frac{1}{2} - \frac{1}{2} + 1 = \boxed{1}$$



$$A = \int_0^{1.139} (e^{-x^2} - (-\sin(3x))) dx \approx 1.445 \quad \boxed{B}$$

(55)  $f(x) = e^x$   $g(x) = \frac{1}{x}$

between  $x=1$  and  $x=2$

$x=1.5 : e^{1.5} \approx 4.48$

$\frac{1}{1.5} = \frac{2}{3}$

$$A = \int_1^2 (e^x - \frac{1}{x}) dx = (e^x - \ln|x|) \Big|_1^2$$

$$= e^2 - \ln 2 - (e^1 - \ln 1) = e^2 - \ln 2 - e \quad \boxed{A}$$