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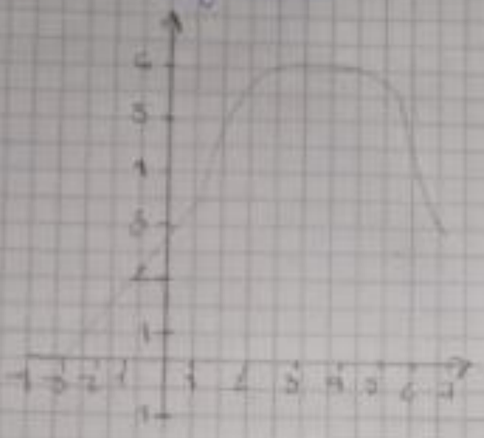
1)



2) a) $5[5 - \frac{7}{2}(-5-3)] = 5[5 - 7(-8)] = 5[5+49] \cdot 0 = 0$

b) $-2 \int f(x)\,dx + 6 \int g(x)\,dx = -2 \cdot 0 + 6(-8) = 6[-8] = 54$

c) $\int 3(f(x) + g(x))\,dx = 3 \cdot 3 + 6(-8) = 97 - 98 = -39$

3)

a) $\int_2^3 x\,dx$

$= \frac{x^2}{2} \Big|_2^3 \quad \frac{3^2}{2} - \frac{2^2}{2} = \frac{9-4}{2} = \frac{5}{2}$

$= 2 \cdot 5 \times 0$

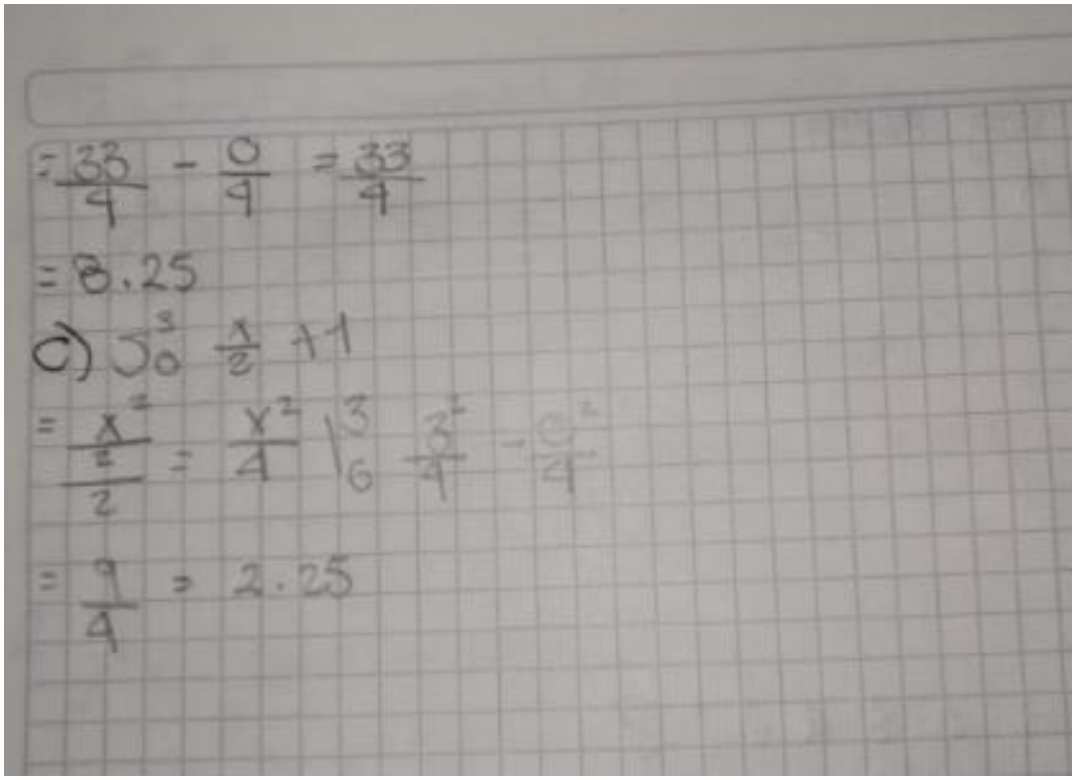
$= 12 \cdot 5$

b) $\int_0^6 \sqrt[3]{x}$

$= \int_0^6 x^{1/3}\,dx = \frac{1}{3} + 1 = \frac{1}{3} + \frac{3}{3} = \frac{4}{3}$

$= \int_0^6 \frac{x^{4/3}}{\frac{4}{3}} = \int_0^6 \frac{3x^{4/3}}{4} = \frac{3\sqrt[3]{x^4}}{4}$

$= \int_0^6 3\sqrt[3]{x^4} \Big|_0^6 \frac{3\sqrt[3]{6^4}}{4} - \frac{3\sqrt[3]{0^4}}{4} = \frac{3 \cdot 11}{4} - \frac{0}{4}$


$= \frac{33}{4} - \frac{0}{4} = \frac{33}{4}$
$= 8.25$
c) $\int_0^3 \frac{x}{2} + 1$
$= \frac{\frac{x^2}{2}}{2} = \frac{x^2}{4} \Big|_0^3 \frac{3^2}{4} - \frac{0^2}{4}$
$= \frac{9}{4} = 2.25$