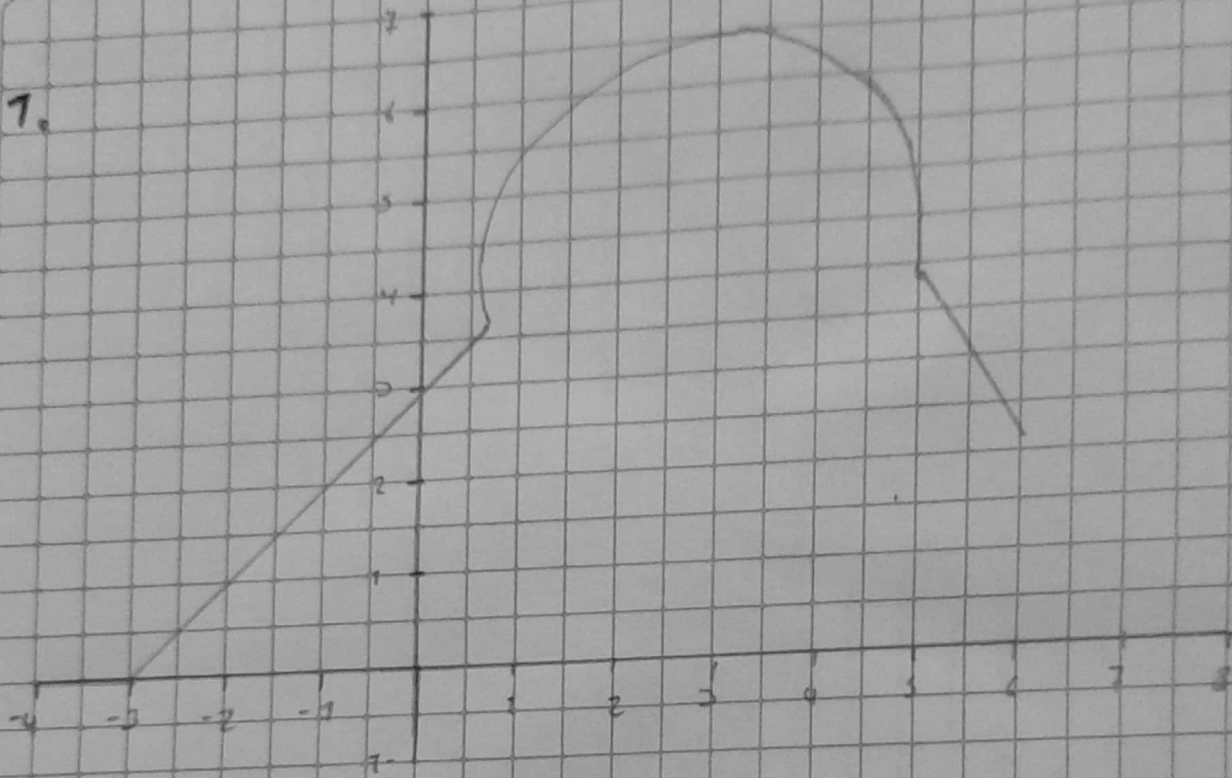


7.



$$2. a) 5 \left[3 - \frac{1}{2} (-5 - 3) \right] = 5 \left[3 - \frac{1}{2} (-8) \right] = 5 [3 + 4] = 5 \cdot 7 = 35$$

$$b) -2 \int_1^3 f(x) dx + 6 \int_3^8 g(x) dx = -2 \cdot 3 + 6(-8) = -6 - 48 = -54$$

$$c) \int_1^3 3(f(x) + g(x)) dx + 3 \cdot 3 + 6(-8) = 9 + -48 = -39$$

$$3. a) \int_2^5 x dx$$

$$= \frac{x^2}{2} \Big|_2^5 = \frac{5^2}{2} - \frac{2^2}{2} = \frac{25}{2} - \frac{4}{2} = \frac{21}{2}$$

$$= 2 \cdot 5 \times 5$$

$$= 72 \cdot 5$$

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

$$= \int_0^6 x^{1/3} dx = \frac{1}{3} + 1 = \frac{1}{3} + \frac{2}{3} = \frac{4}{3}$$

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

$$= \int_0^6 \sqrt[3]{x^4} \quad \left| \begin{array}{l} 6 \\ 0 \end{array} \right. \quad \frac{\sqrt[3]{6^4}}{4} - \frac{\sqrt[3]{0^4}}{4}$$
$$= \frac{33}{4} - \frac{0}{4}$$

$$= \frac{33}{4} - \frac{0}{4} = \frac{33}{4}$$

$$= 8.25$$

$$c) \int_0^3 \frac{x}{2} + 1 dx$$

$$= \frac{x^2}{2} = \frac{x^2}{4} \quad \left| \begin{array}{l} 3 \\ 0 \end{array} \right. \quad \frac{3^2}{4} - \frac{0^2}{4}$$

$$= \frac{9}{4} = 2.25$$