

(1)

$$y = \frac{3}{2}x + 1$$

$$\int_2^6 \frac{3}{2}x + 1$$

$$\int_2^6 \frac{3x^2}{2} + 1 + C$$

$$\int_2^6 \frac{3x^2}{4} + 1 + C$$

$$\int_2^6 \frac{3 \cdot 6^2}{2} + 1 - \left(\frac{3 \cdot 2^2}{2} + 1 \right)$$

$$\int_2^6 \frac{3 \times 36}{2} + 1 - \left(\frac{3 \times 4}{2} + 1 \right)$$

$$\int_2^6 55 + 1 - 7 = 48$$

(3)

$$\int_0^5 4x$$

$$4(5) = 20$$

(4)

$$\int_0^6 5x$$

$$5(6) = 30$$

(5)

$$\int_0^6 4x$$

$$4(6) = 24$$

(2)

$$\int_0^{20} \frac{25}{20} x$$

$$\int_0^{20} \frac{25x^2}{20}$$

$$\int_0^{20} \frac{25x^2}{40}$$

$$\frac{25(20)^2}{40}$$

$$\frac{25(400)}{40} = 250$$