

$$A = \int_0^3 f(x) dx = \int_0^1 f(x) dx + \int_1^3 f(x) dx = 3 + 8 = 11$$

$$B = \int_0^1 3 f(x) dx = 3 \int_0^1 f(x) dx = 3 \cdot 3 = 9$$

$$C = \int_0^2 8 f(x) dx = 8 \int_0^2 f(x) dx = 8 \int_0^1 f(x) dx + 8 \int_1^2 f(x) dx$$

$$= 8 \cdot 3 + 8 \cdot \int_1^2 f(x) dx$$

Or on a

$$\int_1^3 f(x) dx = \int_1^2 f(x) dx + \int_2^3 f(x) dx$$

$$\text{et donc } \int_1^2 f(x) dx = \int_1^3 f(x) dx - \int_2^3 f(x) dx$$

$$= 8 - (-4) = 12$$

Ans: $\int_0^2 8f(x) dx = 24 + 8 \cdot 12 = 24 + 96 = 120$