

Đề bài: Tính:

a) $(a + b + c)^2$; b) $(a + b - c)^2$;

c) $(a - b - c)^2$

Đáp án lời giải:

$$\begin{aligned} \text{a) } (a + b + c)^2 &= [(a + b) + c]^2 = (a + b)^2 + 2(a + b)c + c^2 \\ &= a^2 + 2ab + b^2 + 2ac + 2bc + c^2 \\ &= a^2 + b^2 + c^2 + 2ab + 2bc + 2ac. \end{aligned}$$

$$\begin{aligned} \text{b) } (a + b - c)^2 &= [(a + b) - c]^2 = (a + b)^2 - 2(a + b)c + c^2 \\ &= a^2 + 2ab + b^2 - 2ac - 2bc + c^2 \\ &= a^2 + b^2 + c^2 + 2ab - 2bc - 2ac. \end{aligned}$$

$$\begin{aligned} \text{c) } (a - b - c)^2 &= [(a - b) - c]^2 = (a - b)^2 - 2(a - b)c + c^2 \\ &= a^2 - 2ab + b^2 - 2ac + 2bc + c^2 \\ &= a^2 + b^2 + c^2 - 2ab + 2bc - 2ac. \end{aligned}$$