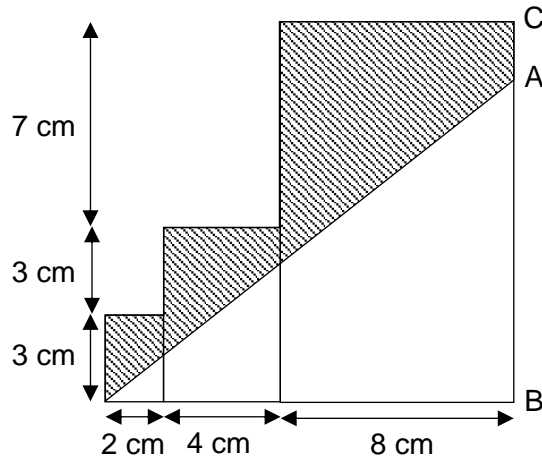# A Maths Question, PSLE 2021

In the figure, the perimeter of the shaded region is 4 cm longer than the perimeter of the unshaded region. Answer each of the following questions.
(a) Find the length of AB.
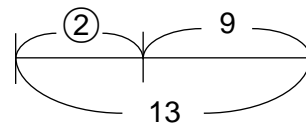(b) Find the area of shaded region.

<< Area and Perimeter >>

(a) If we compare the perimeter of the 2 regions,
the horizontal sides are equal in length and the diagonal line is common.
Therefore, compare the vertical sides only.

$(3 + 3 + 7) + AC = AC + 13$ (cm)   → Sum of vertical sides of shaded region
Since this is 4 cm longer than AB,
$13 - 4 = 9$ (cm)
AB is 9 cm longer than AC.

<G.R.> Let ① be the length of AC.   <Diagram>

AB	AC
①	①
+ 9	

13

<Writing> $(13 - 9) \div 2 = 2$ (cm)   → ①, AC
            $2 + 9 = 11$ (cm)   → AB

(b) $(3 \times 2) + (6 \times 4) + (13 \times 8) = 134$ (cm²) → whole figure
     $14 \times 11 \div 2 = 77$ (cm²)   → unshaded region
     $134 - 77 = 57$ (cm²)   → shaded region

Answer (a) 11 cm   (b) 57 cm²

SAKAMOTO METHOD
サカモト式 ®