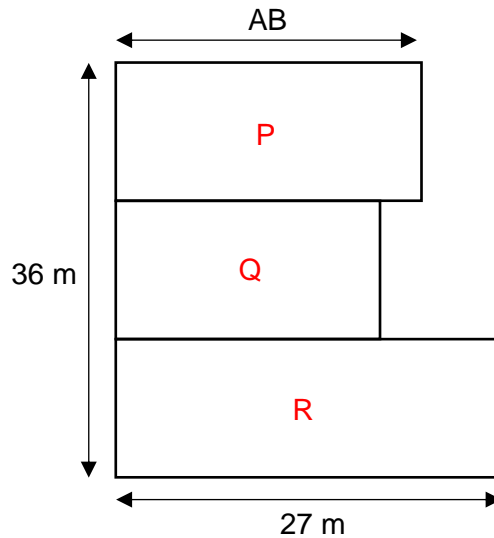A plot of land which had an area of 876 m^2 was divided into three portions of equal width. These portions were fenced using 177 m of fence as shown below.
a) Find the length of AB.
b) Find the perimeter of the plot of land.

Paper 2, Q16

<< Area and Perimeter >>

<Writing>

a) (36 + 27) × 2 = 126 (m)
    177 – 126 = 51 (m)   → 2 × AB
    51 ÷ 2 = 25.5 (m)   → AB

b) 36 ÷ 3 = 12 (m)
    25.5 × 12 = 306 (m^2)   → portion P
    27 × 12 = 324 (m^2)   → portion R
    876 – (306 + 324) = 246 (m^2)   → portion Q
    246 ÷ 12 = 20.5 (m)   → length of portion Q
    177 – 20.5 × 2 = 136 (m)

Answer a) 25.5 m   b) 136 m