

7 (i)

$$\frac{T}{S} = \frac{8}{7}$$

$\Rightarrow$

$$T = \frac{8S}{7}$$

$$T + S = 15$$

$$T + S = 15g$$

$$\frac{8S}{7} + S = 15$$

$$\frac{8S}{7} + S = 15g$$

$$S = 7$$

$$S = 7g \text{ or } 70$$

$$T = 8$$

$$T = 8g \text{ or } 80$$

(ii) Moments about a

$$5g \text{ lacl} + 10g(0.5) = 7g(1)$$

$$5 \text{ lacl} = 7 - 5$$

$$\text{lacl} = 0.4 \text{ m}$$

(iii) Moments about a

$$10(0.5) = S_1(1)$$

$$10g(0.5) = S_1(1)$$

$$S_1 = 5$$

$$S_1 = 5g \text{ or } 50$$

$$T_1 + S_1 = 15$$

$$T_1 + S_1 = 15g$$

$$T_1 = 10$$

$$T_1 = 10g \text{ or } 100$$

$$T_1 : S_1 = 10 : 5 \text{ or } 2 : 1$$