

March 5th

How much does a fish weight if its tail weighs 4kg, its head weighs as much as its tail and half its body and its body weighs as much as its head and tail together?

$$h = 4 + \frac{1}{2} b \quad (1)$$

$$b = h + 4 \quad (2)$$

Substituting (2) into (1)

$$\text{Gives} \quad h = 4 + \frac{1}{2}(h + 4)$$

$$\text{Hence} \quad \frac{1}{2}h = 6$$

$$\text{Therefore} \quad h = 12 \text{ and } b = 16$$

$$\text{Total weight} = \mathbf{12 + 16 + 4 = 32kg}$$