Important Formula

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(1) Speed of the boat in still water

$$= \frac{\text{downstream speed} + \text{Upstream speed}}{2}$$

$$B_s = \frac{P_s + U_s}{2}$$

Ex A man can goes 32 km/hr upstream & 38 km/hr downstream find the speed of man in still water?

$$B_s = \frac{P_s + U_s}{2} = \frac{38 + 32}{2} = 35 \text{ km/hr}$$

(2) Speed of current

$$= \frac{\text{downstream speed} - \text{Upstream speed}}{2}.$$

$$c_s = \frac{D_s - U_s}{2}$$

$D_s > U_s$