IEM KOLKATA

Boats and Streams

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Q1) What will be the boat's speed in still water and speed of river, if the boat takes 12 hours to row 48 km upstream and 8 hours to row the same distance downstream?

Q2) Simran takes twice as long to swim up as to swim down the river and has a speed of 12 km/hr in still water. What is river's speed?
(a) 2km/hr (b) 3km/hr (c) 4km/hr (d) 6km/hr

Q3) It takes P 1 hour to row to a place and to come back. If the river is running at 2.4km/hr and P has a speed of 12 km/hr in still water, what is the distance of this place from P's starting point?
(a) 11.24 (b) 5.76 (c) 5.24 (d) 11.76

Q4) An ocean current flows at a rate of 1.5 km/hr. A shark can swim in still water at the rate 4.5 km/hr. What is the average speed for the entire distance travelled, if the shark swims from point A to point B and comes back?
(a) 4km/hr (b) 3km/hr (c) 9km/hr (d) 12km/hr

Q5) Ajay takes 4 hours more while swimming upstream than downstream. His speed in still water is 10 km/hr. The speed of stream is 2 km/hr. What is the distance?
(a) 108 km (b) 112 km (c) 96km (d) None

Q6) Raj swims 26 km downstream in same time as 14 km upstream. What is his speed in still water if speed of stream is 3 km/hr?
(a) 10 km/hr (b) 20 km/hr (c) 30 km/hr (d) 7 km/hr

Q7) Ratio of Guddi's swimming speed in still water to the speed of river is 7:1. She swims 4.2 km up the river in just 14 min. How much time will Guddi take to swim 18.4 km down the river?
(a) 44 min (b) 42 min (c) 46 min (d) None

Q8) Find the ratio of swimming speed of Raj in still water to speed of river, if ratio of time taken to go 10 km upstream to time taken to go 10 km downstream is 11:5?
(a) 3:8 (b) 8:3 (c) 11:12 (d) None

Q9) Raj swims for $6\frac{1}{2}$ hours while going 24 km downstream and 36 km upstream. But he takes 6 hours to swim 36 km downstream and 24 km upstream. At what rate is the river flowing?

(a) 2km/hr (b) 4km/hr (c) 8km/hr (d) None

Q10) A boat takes 2 hours to travel 24 km downstream and 3 hours to travel the same distance upstream. What is the speed of the boat in still water?

(a) 10 km/hr (b) 11 km/hr (c) 12 km/hr (d) 13 km/hr

Q11) A man can row a boat 25% faster in downstream than in upstream. If he can row 36 km in 4 hours in still water, find the speed of stream?

(a) 0.5 km/hr (b) 2 km/hr (c) 1 km/hr (d) 1.5 km/hr

Q12) The ratio between the speed of boat upstream and doenstream is in the ratio of 3:5. What is the speed of the boat in still water, if it covers 120 km downstream in 8 hours?

(a) 10 km/hr (b) 15 km/hr (c) 12 km/hr (d) 20 km/hr

Q13) A boatman can row a certain distance downstream in 2 hours and the same distance upstream in 3 hours. If the speed of the boat in still water is 20 km/hr, then find the rate at which the stream flows?

(a) 2 km/hr (b) 3 km/hr (c) 4 km/hr (d) 5 km/hr