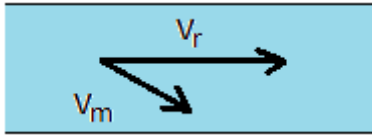


### Answer on Question #64034, Physics / Mechanics | Relativity

A river is flowing from west to east with a speed of 5 m/ min. A man can swim in still water with a velocity 10 m/min. In which direction should the man swim to take the shortest possible path to go the south?

**Solution:**



$$\sin(\alpha) = v_r / v_m$$

$$\sin(\alpha) = 10 / 5 = 0.5$$

$$\alpha = \arcsin(0.5) = 30^\circ$$

$$v_m = \sqrt{v_r^2 + v_m^2} = 11.2 \text{ m/min}$$

**Answer: He should swim in direction  $30^\circ$  east of north**

Answer provided by <https://www.AssignmentExpert.com>