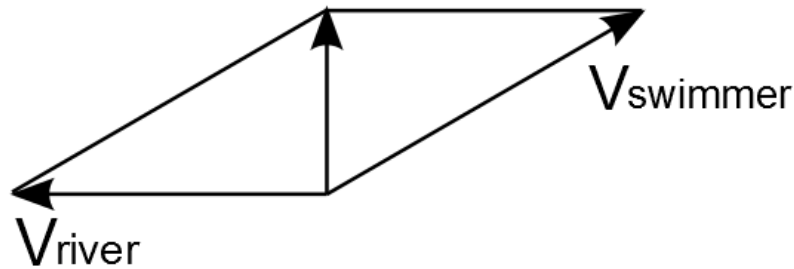**Answer on Question 48603, Physics, Mechanics | Kinematics | Dynamics**

Question:

A person reaches a point directly opposite on the other bank of a flowing river, while swimming at a speed of 5 m/s at an angle of 120 degree with the slow. The speed of the flow must be:

1. 2.5 m/s
2. 3 m/s
3. 4 m/s
4. 1.5 m/s

Solution:

Let's direct x-axis along the river's flow :

$$\left| v_{x\,river} \right| = \left| v_{x\,swimmer} \right|,$$

$$\left| v_{x\,river} \right| = \left| v_{swimmer} \cdot \cos 120^{0} \right| = \left| 5\frac{m}{s} \cdot (-0.5) \right| = 2.5\frac{m}{s}.$$

Answer:

1) The speed of the flow must be $2.5\frac{m}{s}$.