Answer on Question #63144, Physics / Mechanics | Relativity

A person reached the point directly opposite on the other bank of flowing river while swimming at the speed of 5 metre per second at the angle of 120 degree with the flow the speed of flow must be
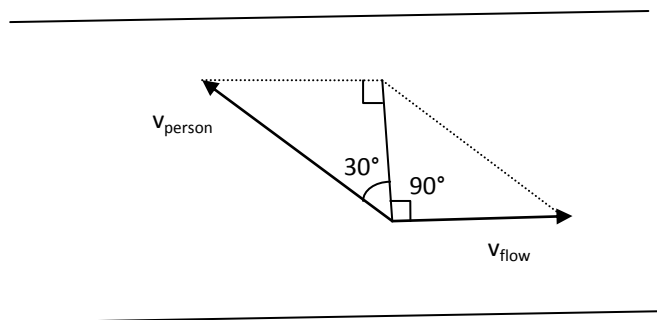
Find: v_{flow} - ?

Given:

v_{person}=5 m/s

θ=120°

Solution:

Of Figure $\Rightarrow$ $\sin 30° = \dfrac{v_{flow}}{v_{person}}$ (1)

Of (1) $\Rightarrow$ $v_{flow} = v_{person} \times \sin 30°$ (2)

Of (2) $\Rightarrow$ v_{flow}=2.5 m/s

Answer:

2.5 m/s