

Downstream/Upstream:

1. In water, the direction along the stream is called downstream. And, the direction against the stream is called upstream.

2. If the speed of a boat in still water is u km/hr and the speed of the stream is v km/hr, then:

Speed downstream = $(u + v)$ km/hr.

Speed upstream = $(u - v)$ km/hr.

3. If the speed downstream is a km/hr and the speed upstream is b km/hr, then:

Speed in still water = $\frac{1}{2}(a + b)$ km/hr.

Rate of stream = $\frac{1}{2}(a - b)$ km/hr.