

Problem 1: Across the river that flows with a rate of 4 m/s, Mr. Pepper swims at the velocity of 3 m/s. Find his velocity relative to the Earth.

For numbers 2 and 3: On a straight two-lane road, you are driving at 40 kph towards the North. On the other lane, a motorcycle approaches you at 56 kph.

Problem 2: Find the motorcycle's velocity relative to you.

Problem 3: Find your speed relative to the motorcycle.

For numbers 4 and 5: A ship sails North in still water at 25 m/s directly across the sea that runs East at 11 m/s.

Problem 4: What is the velocity of the ship relative to Earth?

Problem 5: Find the direction of the ship.