

Ex #1 You hike 20 meters east and then 40 meters north. What is your displacement (magnitude and direction)?

Ex #2 You row east across a river at a speed of 7 m/s. The river flows north at a speed of 3 m/s. From the perspective of someone standing on the shore, what is your velocity (magnitude and direction)?

Ex #3 A ball is thrown with an initial resultant velocity of 12.5 m/s at angle 37° above horizontal. Calculate the x - and y - components of the ball's initial velocity.

Ex #4 An airplane comes in for a landing at a speed of 67 m/s . Its angle is 15° below horizontal. Calculate the x - and y - components of the airplane's velocity.

