

(II) \mathbf{V} is a vector 14.3 units in magnitude and points at an angle of 34.8° above the negative x axis. (a) Sketch this vector. (b) Find V_x and V_y . (c) Use V_x and V_y to obtain (again) the magnitude and direction of $\vec{\mathbf{V}}$. [Note: Part (c) is a good way to check if you've resolved your vector correctly.]

(I) If $V_x = 6.80$ units and $V_y = -7.40$ units, determine the magnitude and direction of $\vec{\mathbf{V}}$.

(I) A delivery truck travels 18 blocks north, 10 blocks east, and 16 blocks south. What is its final displacement from the origin? Assume the blocks are equal length.

(I) A car is driven 215 km west and then 85 km southwest. What is the displacement of the car from the point of origin (magnitude and direction)? Draw a diagram.

(II) An airplane is traveling 735 km/h in a direction 41.5° west of north (Fig. 3-31). (a) Find the components of the velocity vector in the northerly and westerly directions. (b) How far north and how far west has the plane traveled after 3.00 h ?

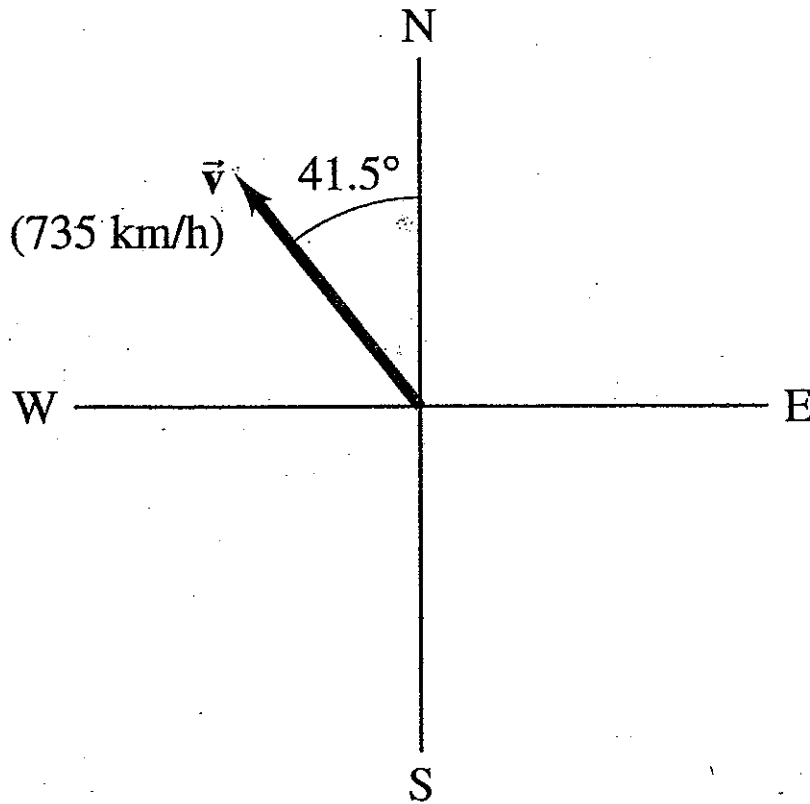


FIGURE 3-31
Problem 9.

(II) Three vectors are shown in Fig. 5-52. Their magnitudes are given in arbitrary units. Determine the sum of the three vectors. Give the resultant in terms of (a) components, (b) magnitude and angle with the x axis.

