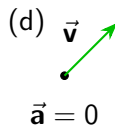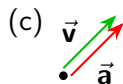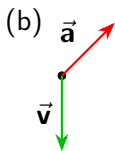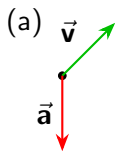A baseball is hit by a bat. After it leaves the bat, while it is still ascending in height, which of the following show the velocity and acceleration?

2D Kinematics 10

You are adding vectors of length 20 and 40 units. Which of the following choices is a possible resultant magnitude?

(a) 0.

(b) 18.

(c) 37.

(d) 64.

(e) 100.

2D Kinematics 11

The magnitude of a component of a vector must be

(a) less than or equal to the magnitude of the vector.

(b) equal to the magnitude of the vector.

(c) greater than or equal to the magnitude of the vector.

(d) less than, equal to, or greater than the magnitude of the vector.

2D Kinematics 12

You are in the middle of a large field. You walk in a straight line for 100 m, then turn left and walk 100 m more in a straight line before stopping. When you stop, you are 100 m from your starting point. By how many degrees did you turn?

(a) 90°

(b) 120°

(c) 30°

(d) 180°

(e) This is impossible. You cannot walk 200 m and be only 100 m away from where you started.