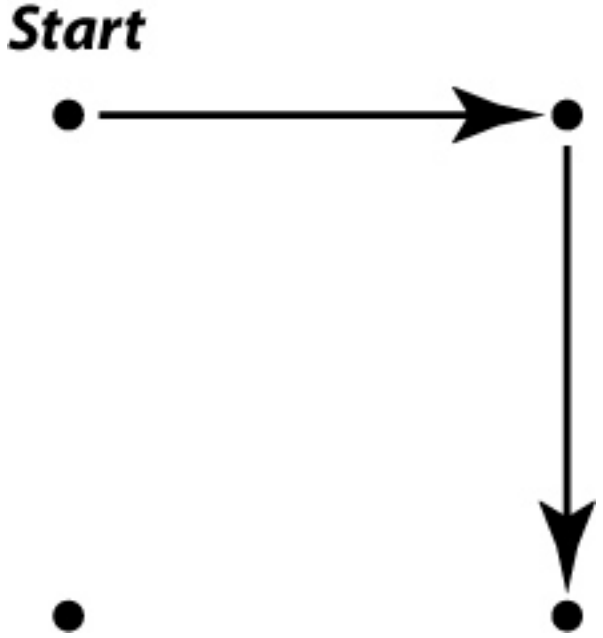
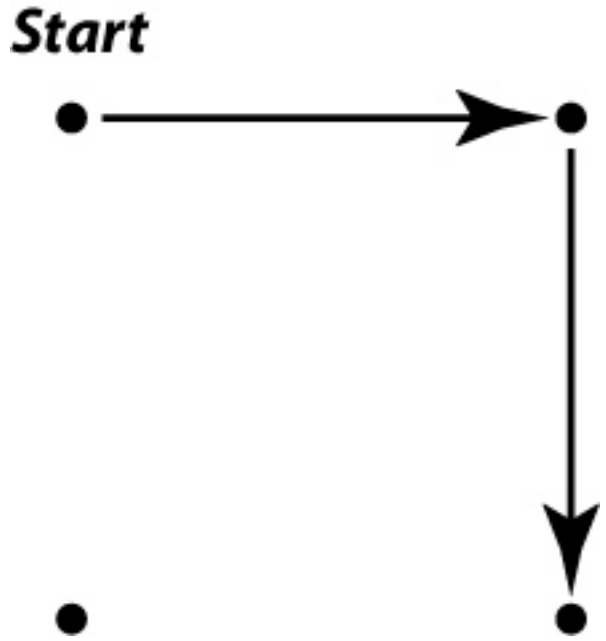
For 1 hour, you travel east in your car covering 100 km .Then travel south 100 km in 2 hours. You would tell your friends that your average speed was



A. 47 km/hr
B. 67 km/hr
C. 75 km/hr
D. 141 km/hr
E. 200 km/hr

For 1 hour, you travel east in your car covering 100 km .Then travel south 100 km in 2 hours. You would tell your friends that your average velocity was



A. 47 km/hr
B. 67 km/hr
C. 75 km/hr
D. 141 km/hr
E. 200 km/hr

Vector Aerobics

- Given that

$$\vec{a} = \hat{i} + 2\hat{j} \qquad \vec{b} = -3\hat{j} \qquad \vec{c} = 4\hat{i}$$

- For each of the following vector operations, find the results both algebraically and show their meaning geometrically.

$$\vec{a} + \vec{c} \qquad \vec{a} - \vec{b} \qquad 2\vec{a} + \vec{b} - \vec{c}$$

At the right are shown some force vectors. Each unit of the grid is 1 Newton. Which of the following vector equations are true?

a) $\vec{A}+\vec{D}+\vec{E}=0$

b) $\vec{B}+\vec{C}=\vec{D}$

c) $2\vec{B}=\vec{A}$

d) $\vec{A}+\vec{C}+\vec{E}=0$

e) None