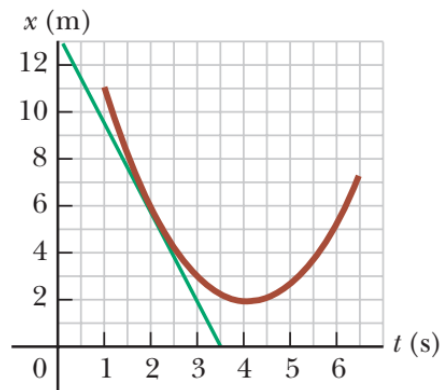


## Quiz 1 Fisika dasar 1A

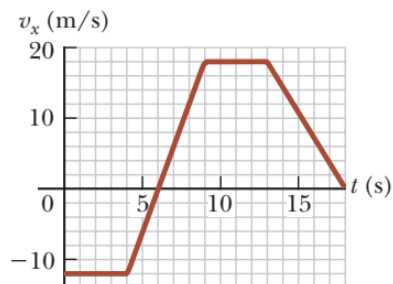
No 1

7. A position–time graph for a particle moving along the  $x$  axis is shown in Figure P2.7. (a) Find the average velocity in the time interval  $t = 1.50$  s to  $t = 4.00$  s. (b) Determine the instantaneous velocity at  $t = 2.00$  s by measuring the slope of the tangent line shown in the graph. (c) At what value of  $t$  is the velocity zero?



No 2

62. An object is at  $x = 0$  at  $t = 0$  and moves along the  $x$  axis according to the velocity–time graph in Figure P2.62. (a) What is the object's acceleration between 0 and 4.0 s? (b) What is the object's acceleration between 4.0 s and 9.0 s? (c) What is the object's acceleration between 13.0 s and 18.0 s? (d) At what time(s) is the object moving with the lowest speed? (e) At what time is the object farthest from  $x = 0$ ? (f) What is the final position  $x$  of the object at  $t = 18.0$  s? (g) Through what total distance has the object moved between  $t = 0$  and  $t = 18.0$  s?



No 3

- 51.** A person going for a walk follows the path shown in **M** Figure P3.51. The total trip consists of four straight-line paths. At the end of the walk, what is the person's resultant displacement measured from the starting point?

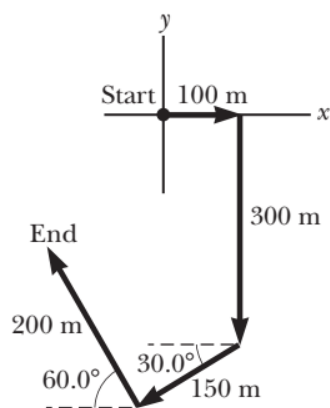


Figure P3.51

No 4

- 36** If  $\vec{d}_1 = 3\hat{i} - 2\hat{j} + 4\hat{k}$  and  $\vec{d}_2 = -5\hat{i} + 2\hat{j} - \hat{k}$ , then what is  $(\vec{d}_1 + \vec{d}_2) \cdot (\vec{d}_1 \times 4\vec{d}_2)$ ?
- 37** Three vectors are given by  $\vec{a} = 3.0\hat{i} + 3.0\hat{j} - 2.0\hat{k}$ ,  $\vec{b} = -1.0\hat{i} - 4.0\hat{j} + 2.0\hat{k}$ , and  $\vec{c} = 2.0\hat{i} + 2.0\hat{j} + 1.0\hat{k}$ . Find (a)  $\vec{a} \cdot (\vec{b} \times \vec{c})$ , (b)  $\vec{a} \cdot (\vec{b} + \vec{c})$ , and (c)  $\vec{a} \times (\vec{b} + \vec{c})$ .