

A particle accelerates uniformly from a speed of 56 cm/s to 87 cm/s in 4 seconds and thereafter moves at a constant speed of 87 cm/s for an additional 9 seconds. The average speed (in cm/s) over this total time interval is:

Select one:

- 82
- 91
- 59
- 44
- 28



A particle moves along the x-axis. Its position is given by the equation  $x = 11 + 12t - 4t^2$  with  $x$  in meters and  $t$  in seconds. Its position (in meter) when it changes direction is:

Select one:

20.0

15.3

2.56

17.6

22.6



An object moves along the x-axis according to the equation:

$$x(t) = (2t^3 + t - 1) \text{ m,}$$

where  $t$  in seconds. The average acceleration between  $t = 1 \text{ s}$  and  $t = 4 \text{ s}$

(in  $\text{m/s}^2$ ) is:

Select one:

- 24
- 10
- 20
- 12
- 16

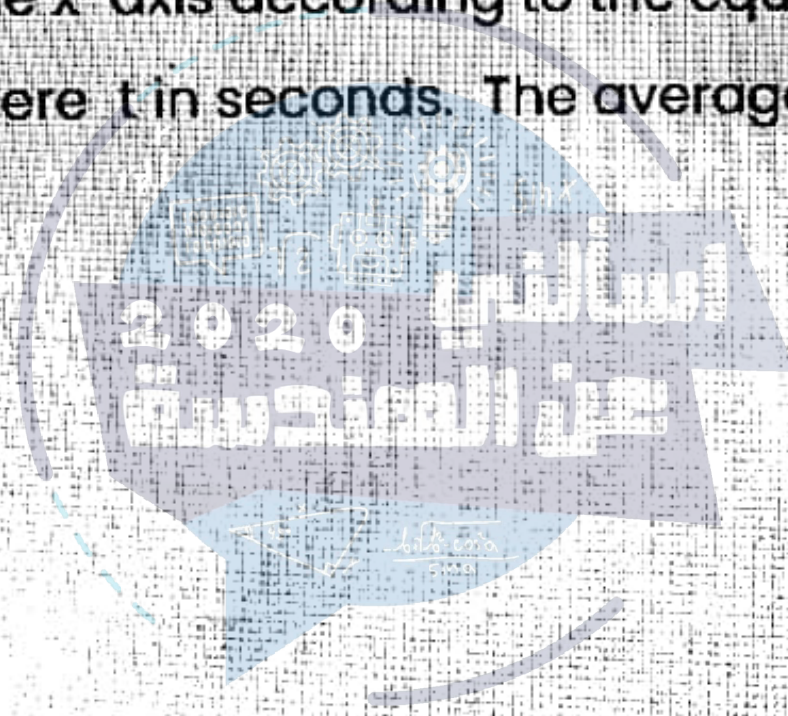
An object moves along the x-axis according to the equation:

$x(t) = (2t^3 + t - 1)$  m, where  $t$  in seconds. The average acceleration between  $t = 1$  s and  $t = 5$  s

(in  $m/s^2$ ) is:

Select one:

- 12
- 20



A particle moves along the x-axis. Its position is given by the equation  $x = 6 + 7t - 4t^2$  with  $x$  in meters and  $t$  in seconds. Its position (in meter) when it changes direction is:

Select one:

- 2.56
- 5.56
- 13.1
- 15.3
- 9.06



An object moves along the x-axis according to the equation:

$x(t) = (2t^3 + t - 1) \text{ m}$ ,  
where  $t$  in seconds. The  
average acceleration  
between  $t = 1 \text{ s}$  and  $t = 3 \text{ s}$   
(in  $\text{m/s}^2$ ) is:

Select one:

20

12

16

24

10

An object moves along the  $x$  axis according to the equation:

$x(t) = (2t^3 + t - 1)$  m, where  $t$  in seconds. The average acceleration between  $t = 1$  s and  $t = 5$  s (in  $m/s^2$ ) is:

Select one:

16

10

20

12

24



x-axis according to the equation:

$x(t) = (2t^3 + t - 1) \text{ m}$ ,  
where  $t$  in seconds. The average acceleration between  $t = 1 \text{ s}$  and  $t = 5 \text{ s}$  (in  $\text{m/s}^2$ ) is:

Select one:

24

16

10

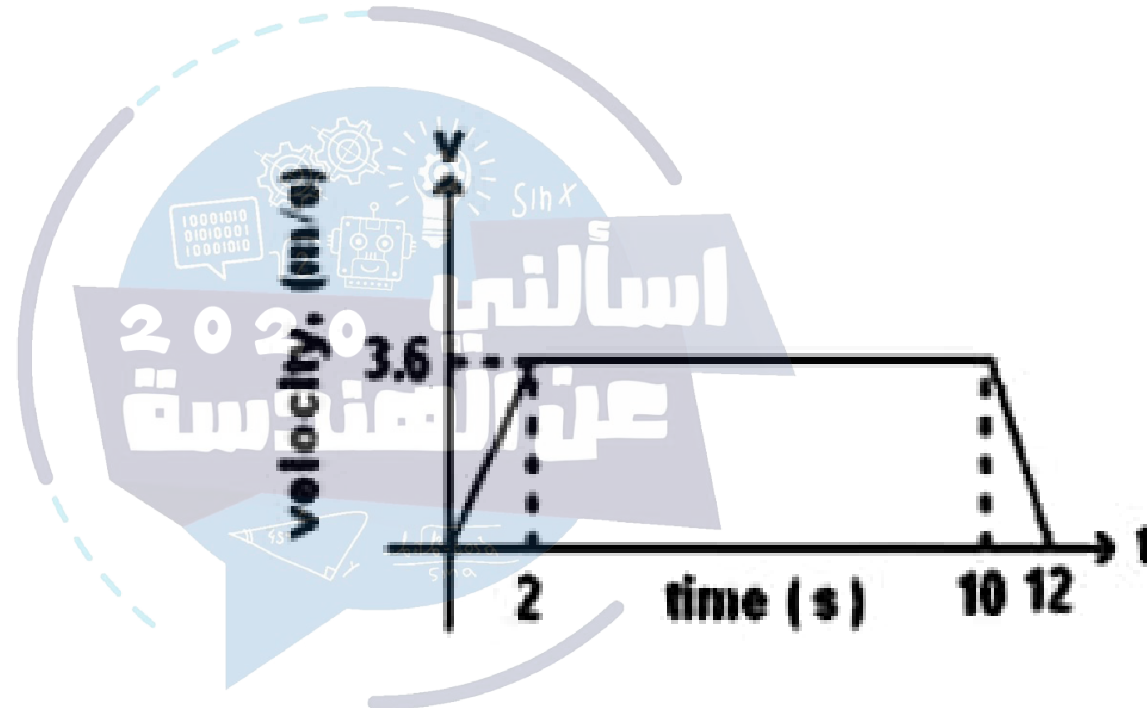
12

20



A lift is going up. The variation in the speed of the lift is as given in the graph. What will be the average velocity of the lift ?

- a) 3 m/s
- b) 2.88 m/s
- c) 3.24 m/s
- d) 1 m/s
- e) none



An object moves along the x-axis according to the equation:

$$x(t) = (2t^3 + t - 1) \text{ m,}$$

where  $t$  in seconds. The average acceleration between  $t = 1 \text{ s}$  and  $t = 3 \text{ s}$

(in  $\text{m/s}^2$ ) is:

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Select one:

- 20
- 10
- 24
- 12
- 16

An object starts motion from rest and from the origin and moves along the x axis with constant acceleration of  $4 \text{ m/s}^2$ . Its average velocity as it moves from  $x = 2 \text{ m}$  to  $x = 8 \text{ m}$  is:

Select one:

- 2 m/s
- 6 m/s
- 5 m/s
- 1 m/s
- 3 m/s



A plane travelling north at 250 m/s turns and then travels south at 250 m/s. The change in its velocity is

Select one:

- 500 m/s north
- 500 m/s south
- zero
- 250 m/s south



A particle accelerates uniformly from a speed of 65 cm/s to 88 cm/s in 9 seconds and thereafter moves at a constant speed of 88 cm/s for an additional 7 seconds. The average speed (in cm/s) over this total time interval is:

Select one:

82

65

17

32

44



An object moves along the x-axis according to the equation:

$$x(t) = (2t^3 + t - 1) \text{ m,}$$

where  $t$  in seconds. The average acceleration between  $t = 1 \text{ s}$  and  $t = 5 \text{ s}$

(in  $\text{m/s}^2$ ) is:

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2020  
عن الهندسة

Select one:

20

24

16

10

12

An object moves along the  
x-axis according to the  
equation

$x(t) = (2t^3 + t - 1) \text{ m}$ ,  
where  $t$  in seconds. The  
average acceleration  
between  $t = 1 \text{ s}$  and  $t = 2 \text{ s}$

is (in  $\text{m/s}^2$ )

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اختراع الخيارات

20

12

24

16

10

A particle accelerates uniformly from a speed of 45 cm/s to 75 cm/s in 5 seconds and thereafter moves at a constant speed of 75 cm/s for an additional 5 seconds. The average speed (in cm/s) over this total time interval is:

Select one:

68

78

18

34

51





A particle moves along the x-axis. Its position is given by the equation  $x = 11 + 12t - 4t^2$  with  $x$  in meters and  $t$  in seconds. Its position (in meter) when it changes direction is:

Select one:

20.0

15.3

2.56

17.6

22.6



A person walks in a distance  $x$  northward, turns around and walks a distance  $7.00x$  southward. If the total displacement of the person from his starting position is 300 m south. What \* was the total distance walked (2 نقطة)

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800

400

600

200