NORTHWEST TERRITORIES PHYSICS 11 (MPH--11) · UNIT A · 25 QUESTIONS

Kinematics: Describing Motion — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Displacement is best described as**

- A the total path length travelled
- B the speed of an object
- C the straight line change in position
- D the time taken for a trip

Understand It with Pulse | Flag a mistake

2 **A runner goes 40 m east, then 30 m west. The magnitude of the displacement, in metres, is ____**

ANSWER _____

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3 **A cyclist covers 120 m in 20 s. The average speed, in metres per second, is ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A swimmer is displaced 60 m east in 12 s. The average velocity, in metres per second, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The unit of acceleration is**

A m per s

B m per s squared

C m

D kg m per s

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6 **An object starts at 2 m per s and accelerates at 3 m per s squared for 4 s. The final speed, in metres per second, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A train speeds up from 5 m per s to 20 m per s in 3 s. The acceleration, in metres per second squared, is ____**



ANSWER _____

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8 **A cart starts from rest and accelerates at 4 m per s squared for 3 s. The displacement, in metres, is ____**

ANSWER _____

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9 **A sled starts from rest, accelerates at 2 m per s squared, and covers 25 m. The final speed, in metres per second, is ____**

ANSWER _____

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10 **A ball is dropped from rest. Using g = 9.8 m per s squared, its speed after 2 s, in metres per second, is ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A ball is dropped from rest. Using g = 9.8 m per s squared, the distance it falls in 2 s, in metres, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **On a displacement time graph, the slope of the line gives**

A velocity

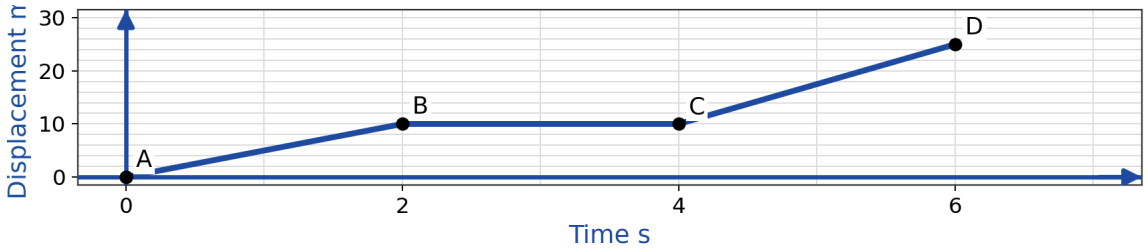
B acceleration

C distance

D time

Understand It with Pulse | Flag a mistake

13 **The graph shows displacement against time. The speed from 0 s to 2 s, in metres per second, is**



A 2

B 5

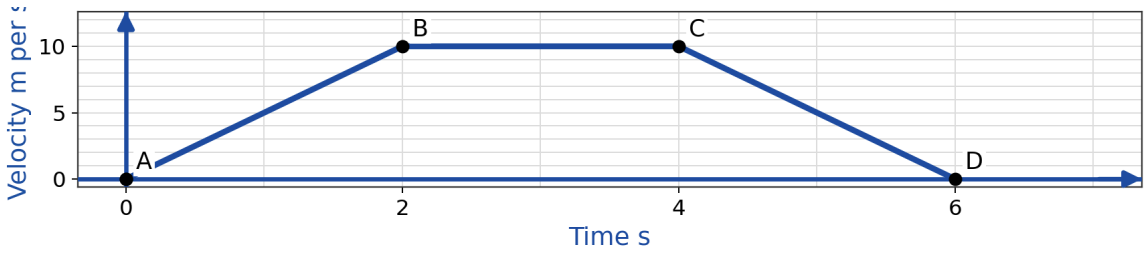
C 7.5

D 10

Understand It with Pulse

Flag a mistake

14 **The graph shows velocity against time. The displacement from 0 s to 6 s, in metres, is**



A 30

B 50

C 60

D 40

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Flag a mistake

15 **For a projectile with no air resistance, the horizontal component of velocity**



A increases steadily

B decreases steadily

C stays constant

D becomes zero at the top

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16 **A ball is thrown upward with a vertical speed of 19.6 m per s. Using g = 9.8 m per s squared, the time to reach the top, in seconds, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A ball moves horizontally at 8 m per s while it falls for 2 s. The horizontal distance covered, in metres, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **On a velocity time graph, a horizontal line means the object has**

A constant velocity

B increasing acceleration

C zero velocity

D decreasing speed

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19 **Velocity components are 6 m per s horizontally and 8 m per s vertically. The magnitude of the velocity, in metres per second, is**

A 6

B 8

C 10

D 14

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20 **A car moving east slows down. Its acceleration points**



A east

B west

C north

D south

Understand It with Pulse | Flag a mistake

21 **A car brakes from 20 m per s to rest in 5 s. The acceleration, in metres per second squared, is _____**



ANSWER

Understand It with Pulse | Flag a mistake

22 **A displacement time graph curves upward more and more steeply. The object is**

A at rest

B moving at a steady speed

C slowing down

D speeding up

Understand It with Pulse | Flag a mistake

23 **A hiker walks 30 m in 6 s, then 20 m in 4 s. The average speed for the whole walk, in metres per second, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **Which quantity is a scalar**

A velocity

B displacement

C speed

D acceleration

Understand It with Pulse | Flag a mistake

25 **An object starts at 3 m per s and accelerates at 2 m per s squared for 5 s. The displacement, in metres, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. 10
3. 6
4. 5
5. B
6. 14
7. 5
8. 18
9. 10
10. 19.6
11. 19.6
12. A
13. B
14. D
15. C
16. 2
17. 16
18. A
19. C
20. B
21. -4
22. D
23. 5
24. C
25. 40

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