ALASKA PHYSICS · UNIT 1 · 10 QUESTIONS

Kinematics and Dynamics — 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 **A projectile has horizontal speed 15 m/s and stays in the air for 6 s. Its horizontal range is**

- A 90 m
- B 15 m
- C 21 m
- D 150 m

Understand It with Pulse | Flag a mistake

2 **Use g = 10 m/s². A ball is thrown upward with vertical speed 40 m/s. The time to reach its highest point is**

- **A** 2 s
- **B** 8 s
- **C** 4 s
- **D** 40 s

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3 **A net force of 36 N acts on a 9 kg object. Its acceleration is**

- **A** 324 m/s²
- **B** 4 m/s²
- **C** 45 m/s²
- **D** 0.25 m/s²

Understand It with Pulse | Flag a mistake

4 **Use g = 10 m/s². The weight of a 15 kg object is**

- A 1.5 N
- B 25 N
- C 150 N
- D 1500 N

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5 **The coefficient of kinetic friction is 0.25 and the normal force is 120 N. The kinetic friction force is**

- A 145 N
- B 95 N
- C 480 N
- D 30 N

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6 **Forces of 40 N east and 15 N west act on an object. The net force is**

A 25 N east

B 55 N east

C 55 N west

D 25 N west

Understand It with Pulse | Flag a mistake

7 **The statement that an object keeps its motion unless a net force acts is Newton**

A second law

B first law

C third law

D law of gravitation

Understand It with Pulse | Flag a mistake

8 **On a velocity time graph, the area under the line gives the**

A acceleration

B force

C displacement

D mass

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9 **An object moves in a circle at speed 12 m/s with radius 24 m. Its centripetal acceleration is**

A 288 m/s^2

B 0.5 m/s^2

C 2 m/s^2

D 6 m/s^2

Understand It with Pulse | Flag a mistake

10 **A car moving at 18 m/s brakes with acceleration -3 m/s². The stopping distance, in meters, is ____**

ANSWER

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ANSWER KEY

1.	A	**5.**	D	**9.**	D
2.	C	**6.**	A	**10.**	54
3.	B	**7.**	B		
4.	C	**8.**	C		

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