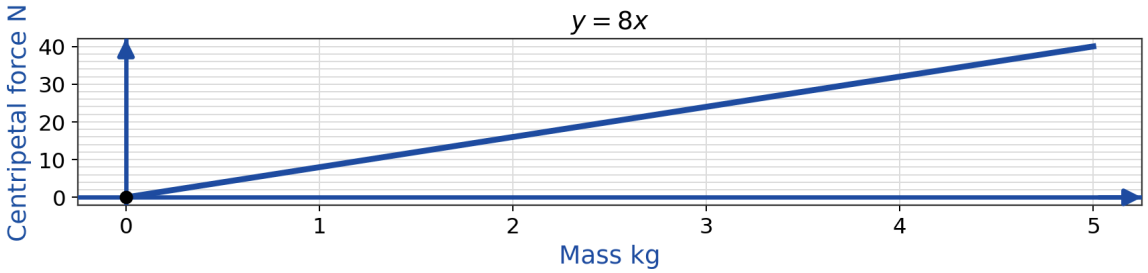
NORTHWEST TERRITORIES PHYSICS 12 (MPH--12) · UNIT B · 10 QUESTIONS

Dynamics and Circular 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 **The graph shows centripetal force against mass for a speed of 4 m per s and a radius of 2 m. At a mass of 3 kg, the force, in newtons, is**



A 8

B 16

C 24

D 32

Understand It with Pulse

Flag a mistake

2 **If the distance between two masses is tripled, the gravitational force between them becomes**

A three times as large

B nine times as large

C one third as large

D one ninth as large

Understand It with Pulse | Flag a mistake

3 **If the orbital radius of a satellite increases by a factor of 9, its orbital period increases by a factor of**

A 3

B 9

C 27

D 81

Understand It with Pulse | Flag a mistake

4 **An object at rest on a flat surface has a net force of**



A 0 N

B 9.8 N

C its weight

D its mass

Understand It with Pulse | Flag a mistake

5 **For an object in uniform circular motion, the velocity at any instant points**

A toward the centre

B along the tangent

C away from the centre

D vertically downward

Understand It with Pulse | Flag a mistake

6 **If the distance from a planet centre is doubled, the gravitational field strength becomes**

A twice as large

B four times as large

C unchanged

D one quarter as large

Understand It with Pulse | Flag a mistake

7 **An 8 kg block rests on a flat surface. Using g = 9.8 m per s squared, the normal force on it, in newtons, is**



ANSWER

Understand It with Pulse | Flag a mistake

8 **A net force of 30 N acts on a 5 kg object. Its acceleration, in metres per second squared, is**

ANSWER

Understand It with Pulse | Flag a mistake

9 **A geostationary satellite has an orbital period of**

- A 1 hour
- B 12 hours
- C 24 hours
- D 30 days

Understand It with Pulse | Flag a mistake

10 **The mass of an object on the Moon compared with its mass on Earth**

- A is the same
- B is about one sixth
- C is about six times
- D is zero

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. D
3. C
4. A
5. B
6. D
7. 78.4
8. 6
9. C
10. A

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