



Name _____ Class _____ Date _____

1

A 15-kilogram mass weighs 60 newtons on planet X. The mass is allowed to fall freely from rest near the surface of the planet. After falling for 6.0 seconds, the acceleration of the mass is

- A 0.25 m/s²
- B 10 m/s²
- C 24 m/s²
- D 4.0 m/s²

2

The **gravitational force of attraction** between two objects would be **increased** by

- A doubling the mass of both objects, only
- B doubling the distance between the objects only
- C doubling the mass of both objects and doubling the distance between the objects
- D doubling the mass of one object and doubling the distance between the objects

3

Gravitational field strength is to **newtons per kilogram** as **electric field strength** is to

A coulombs per joule

4

The diagram below represents the orbit of a comet about the Sun.

At which **position** in its orbit is the comet's

5



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to 118 K. These temperatures correspond to **Celsius temperatures** ranging from

- A 125°C to -391°C
- B 125°C to -155°C
- C 671°C to 391°C
- D 671°C to 155°C

- A 88 m
- B 44 m
- C 29 m
- D 9.8 m



9

What is the magnitude of the **gravitational force** between two 5.0 kilogram masses separated by a distance of 5.0 meters?

- A 5.0×10^0 N
- B 3.3×10^{-10} N
- C 6.7×10^{-11} N
- D 1.3×10^{-11} N



10

A 2.0-kilogram mass weighs 10 newtons on planet X. The **acceleration due to gravity** on planet X is approximately

- A 0.20 m/s²
- B 5.0 m/s²
- C 9.8 m/s²
- D 20 m/s²



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A 20-kilogram mass weighs 10 newtons on planet X. The **acceleration due to gravity** on planet X is approximately

- A 0.20 m/s²
- B 5.0 m/s²
- C 9.8 m/s²
- D 20 m/s²