

PHYSICS_EOT_BASED_PRACTICE

ANSWERS

DONE BY : GHAYOOH



NAME : _____

GRADE: _____

YOUR MARK : 100 \ _____

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The speed of planet is _____ when it is nearest to earth.

- Smallest
- Larger
- constant

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Tom's mass is 70.0 kg, and Sam's mass is 50.0 kg. Tom and Sam are standing 20.0 m apart on the dance floor. What is the gravitational force between Sam and Tom ?

- 5.84×10^{10}
- 6.84×10^{10}
- 5.84×10^{-10}
- 6.84×10^{-10}

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Newton found that the gravitational force between two masses is directly proportional to the square of ?

- the strength of the gravitational field
- the product of the masses
- the distance between them
- the sum of the masses

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Newton found that the gravitational force between two masses is inversely proportional to the square of _____.

- the sum of the masses
- the strength of the gravitational forces field
- The product of two masses
- The distance between them

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A force of 825N is exerted horizontally, pushing a car a distance of 35 m in the same direction. How much is the work done on the car?

- 2.9×10^4 J
- 3.9×10^4 J
- 2.4×10^4 J
- 3.4×10^4 J

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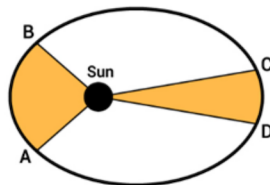
Kepler's second law states that an imaginary line from the Sun to a planet sweeps out equal ----- in equal times.

- lengths
- areas
- positions

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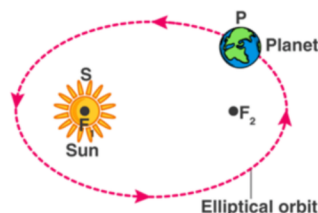
At which two points the velocity is maximum?

- A and C
- B and D
- A and B
- B and C


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Which of the following physics laws describes the planets orbits as represented by the figure below?

- kepler's first law
- kepler's second law
- kepler's third law
- Newton's law of gravitation


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A planet orbits the Sun at 2.87×10^9 km. The mass of the Sun is 1.99×10^{30} kg. What is the orbital period of the planet?

- 230 years
- 378 years
- 412 years
- 736 years

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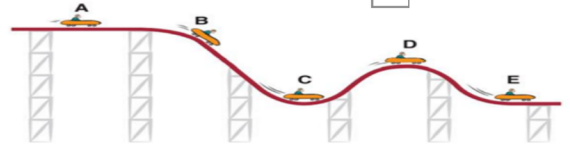
Earth is 1.50×10^{11} m from the Sun and has a period of 365.2 days. Mars is an average of 2.28×10^{11} m from the Sun. Find the ratio of periods of Mars to Earth

- 1.87
- 3.78
- 4.12
- 7.36

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What happen to the kinetic energy and the potential energy From point B to C ?

- Kinetic energy decrease , potential energy increase
- Kinetic energy increase , potential energy decrease
- Kinetic energy decrease , potential energy decrease
- Kinetic energy increase , potential energy increase

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Two objects each with mass m at a distance r from each other. The gravitational force between them is F . If the masses of the objects are increased to be $3m$, what will be the gravitational force between the objects?

- $3F$
- $F/3$
- $9F$
- $F/9$

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A skier starts from rest at the top of a hill that is 45.0 m high, skis down a 30° incline into a valley, and continues up a hill that is 40.0 m high. The heights of both hills are measured from the valley floor. Assume that friction is negligible and ignore the effect of the ski poles.

a. How fast is the skier moving at the bottom of the valley? (5 Marks)

3.0×10 to the power 1

b. What is the skier's speed at the top of the second hill? (5 Marks)

9.9 m/s

Tony has a mass of 45 kg and is moving with a speed of 10.0 m/s. a. Find Tony's kinetic energy ?

- 225 J
- 500 J
- 2000 J
- 2250 J

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According to Pascal's principle, any change in pressure on a confined fluid _____?

- is inversely proportional to the volume of the fluid
- is directly proportional to the volume of the fluid
- depends on the shape of the container.
- is transmitted undiminished throughout the fluid.

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Abdullah exerts a force of 24 N to pull a child 350 m across the snow on a sled. If the rope that joins the sled is at an angle of 30.0° above the horizontal, how much work is done on the sled?

7600 j

A moon revolves around a planet with a speed of 9.0×10^3 m/s. The distance from the moon to the centre of the planet is 5.4×10^6 m. What is the orbital period of the moon

3770s

Suppose that engineers are planning to place the International Space Station (ISS) into orbit at an altitude of 450 km above Earth's surface. What would be the orbital speed and period of the ISS?

$V = 7640 \text{ m/s}$ or $27,500 \text{ km}$
 $T = 5620 \text{ s}$

a) A moon revolves around a planet with a speed of $9.0 \times 10^3 \text{ m/s}$. The distance from the moon to the centre of the planet is $5.4 \times 10^6 \text{ m}$. What is the orbital period of the moon?

3770 s

﴿لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا﴾
﴿وَتَوَكَّلْ عَلَى اللَّهِ وَكَفَى بِاللَّهِ وَكِيلًا﴾

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