

Suppose that the Sun were to suddenly disappear from our solar system. What would happen to earth's motion

It would begin traveling in a straight line heading out of the solar system

Which of the following statements about electrons is not true

Electrons are actually neutrons that have acquired an electrical charge

The Metonic Cycle is the

19 year period over which the lunar phases occur on about the same dates

Which statement about the cosmological principle is valid

It is based on two tenets involving the universality of the laws of physics and chemistry and the belief that there is nothing special about Earth

Considering Einstein's famous equation $E = mc^2$ which of the following is true

A small amount of mass can be turned into a large amount of energy

Which of the following best describes the origin of the ocean tides on earth

Tides are caused by the difference in the force of gravity exerted by the moon across the sphere of the Earth

What does temperature measure

The average kinetic energy of particles in a substance

Upon what quantities does angular momentum depend

Mass velocity radius

The amount of matter contained in an object is called its mass. Which of the following is false

If you were to go to the moon your mass would be lower than your mass on Earth because gravity is less on the moon

Where does the energy come from that your body uses to keep you alive

Mostly it comes from the foods you eat

Without telescopes or other aid we can see the moon in the night sky because

It reflects light

The scientific method is best described by which of the following

A system of collecting analyzing data, formulating a hypothesis, testing it and reforming it as needed

If your mass is 60 KG on earth would it be on Jupiter

60 KG

The names of the 7 days of the week are based on

Seven naked eye objects that appear to move among the constellations

Which of the following is not one of nor follows kepler's laws

When a planet travels slower it must be nearer to the sun and it speeds up far from the sun

Ptolemy was important in history of astronomy because he

Developed a model of the solar system that made sufficiently accurate predictions of planetary positions to remain in use for centuries

Radiative energy is

Energy carried by light

Retrograde motion is observable for what objects

Planets located more distant from the sun than earth

The doppler shift is a wave phenomenon that

Uses change in wavelength of light to determine speed of a moving star

At which lunar phases are the tides smallest

Both first and 3rd

When copernicus 1st created his sun centred model it not lead to better predictions than ptolemaic why

Copernicus used perfect circles for the orbits of the planets

A skater can spin faster by pulling arms closer to her body and slower by pulling out

Conservation of angular momentum

From lowest energy to highest energy electromagnetic radiation

Radio, infrared, visible, ultraviolet, x rays, gamma rays

Spectral line formed by hydrogen appears at a wavelength of 486.1 nanometres the spectrum of a star shows the same hydrogen line appearing at 485.2 what can we conclude

The star is moving towards us

Which of the following is not a unit of energy

Kilowatt

The frequency of a wave is

All of the above

Spectroscopy can be used to

All of the above

Which of the following statements best describes the principle advantage of telescopes over eyes

Telescopes can collect far more light with far better angular resolution

A green apple looks green because

It reflects green light and absorbs all other colours

The wavelength of a wave is

The distance between two adjacent peaks of the wave

Kinetic Energy is

Energy of motion

What would happen if the space shuttle were launched with greater speed than earth's escape velocity

It would travel away from the Earth into the solar system

What do astronomers mean by light pollution

Refers to light used for human activities that brightens the sky and hinders astronomical observations

Which of the following statements is not one of Newton's laws of motion

The net force applied to an object is equal to its mass times velocity

Which of the following statements correctly describes the law of conservation of energy

The total quantity of energy in the universe is constant, although we're not sure how much energy there really is

Which of the following statements about X rays and radio waves is not true

Neither X rays nor radio waves can penetrate the Earth's atmosphere

Which of the following is not an advantage of the HST over ground based telescopes

Although it orbits the Earth and is outside the atmosphere, it is closer to the stars

When you hold a rock potential energy, drop it kinetic, hits the ground what happens

The energy goes to producing sound and to heating the ground, rock, air

The trouble with refraction telescopes is that

Different colours of visible starlight get focused to different points in space making the image blurry

Suppose the angular separation of 2 stars is smaller than the angular resolution of your eyes how will stars appear to your eyes

The 2 stars look like a single point of light