The unit of force in S.I. units is

Newton
The unit of work or energy in S.I. units is _____.

Joule
Find the distance a hiker walks if he travels 3.50 km north, and then turns around and walks 3.00 km south.

6.5 km
The SI unit of absolute temperature is _____

Kelvin
The reluctance of an object to start or stop moving is known as _____.

inertia
3-vectors are only properly represented in a 3-dimensional _____.

space
The coefficient of limiting static friction is the ratio of the ____ to the normal force.

frictional force
An object is shot from the ground at 75m/s at an angle of 45 degrees above the horizontal. How high does the object get before beginning its descent?

140 m
If a force of 40N acting in the direction due East and a force of 30N is acting in the direction due North. Then the magnitude of the resultant forces will be _____.

50N
A Null vector is a vector whose magnitude is _____.

zero
The heat required to raise the temperature of the body through 1K is called _____

heat capacity
An object is shot from the ground at 125m/s at an angle of 30 degrees above the horizontal. How far away does the object land?

1350 m
The _____ pendulum is any real pendulum in which all the mass is taken to be concentrated at a point

physical
The amplitude of oscillations of a particle in simple harmonic motion is damped by _____ forces due to the surrounding medium.

Resistive
What is the unit of impulse?

Ns
The _____ occurs when the driving frequency is the same as the natural frequency of the oscillator.

resonance
Forces are called coplanar when all of them acting on body lie in one _____.

plane
The locus of the instantaneous centre of a moving rigid body is called _____.

centroid
The _____ is an aggregate of point masses such as that the relative separation between any two points remains invariant

rigid body
The general motion of a rigid body is a combination of _____and rotation.

translation
The specific latent heat of vapourization of a liquid is the quantity of heat in joules required to change 1kg mass of the liquid at its _____to gas at the same temperature.

boiling point
Radius of _____ is the radial distance from any given axis at which the mass of a body is concentrated without changing the moment of inertia of the body about that axis.

gyration
_____forces meet at one point and have their lines of action in different planes.

non-coplanar current
Applied force is proportional to extension produced is a statement of ____ law.

Hooke's
A _____ is the turning effect caused by a couple.

torque
A _____ consists of two equal and opposite parallel forces.

couple
When a gas is allowed to expand at constant temperature the process is described as ____.

isothermal
What is the spring constant (in N/m) of an elastic material that produces an extension of 5 cm when a weight of 0.35 N is applied?

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The velocity of a particle at some point of its path is called _____.

instantaneous velocity
In a circular motion which of the quantities is constant?

acceleration
_____ is that which enables a body to perform work.

Energy
According to the kinetic-molecular theory, particles of matter are in____ motion.

constant
According to the kinetic-molecular theory, particles of matter are in motion in both gas and _____.

liquid
When an adiabatic work is done on or by a system the change in internal energy is equal to the _____ work done.

adiabatic

According to the kinetic-molecular theory, particles of an ideal gas neither attract nor repel each other but _____.

collide
One of the following is not a fundamental quantity.

Volume
Which of the following is a coordinate system for specifying the precise location of objects in space?

Frame of reference

In physics, frames of reference are classified by two main types: _____.

fast and slow

Which of the following quantities is considered a vector?

Displacement

For the 3-vector (-2, 5, 6) in an xyz-coordinate plane the 5 corresponds to a

positive value along the x-axis

A body moves, from rest with a constant acceleration of 5 m per squared sec. The distance covered in 5 sec is most nearly

62.5 m

The amount of heat energy per mole that must be added or removed when a substance changes from one phase to another is called _____.

latent heat

A football player could routinely kick a ball at a horizontal speed of 160 km/hr. How long did the ball take to reach a point 18.4m away?

0.414 s

The rate of evaporation decreases with increasing _____

pressure

The____ pendulum is any real pendulum in which all the mass is taken to be concentrated at a point.

physical

The amplitude of oscillations of a particle in simple harmonic motion is damped by _____ forces due to the surrounding medium

Resistive

A man will exert the greatest pressure on a bench when he _____

stands on the toes of one foot

The gravitational force on a satellite produces the centripetal acceleration that keeps the satellite in

orbit

The ____ occurs when the driving frequency is the same as the natural frequency of the oscillator.

Sound

A 2kg box is at the top of a frictionless ramp at an angle of 60o. The top of the ramp is 30m above the ground. The box is sitting still while at the top of the ramp, and is then released. What is the velocity of the box just before it hits the ground?

32.2 m/s

An ungraduated mercury thermometer attached to a millimeter scale reads 22.8mm in ice and 242mm in steam at standard pressure. What will the millimetre read when the temperature is 20oC?

66.64mm

Convert 45oC to oF

113oF

Alcohol boils at

78oc

The path followed by the projectile is known as

trajectory

How much heat is required to melt 1.5kg of ice and then to raise the temperature of the resulting water to 50oC?

8.1 x 10^ 5J

When matter is heated, it

expands

If the linear expansivity is of a metal is 2.0 x 10-5 oC-1, calculate its cubical expansivity.

6.0 x 10-5 oC-1

A fixed mass of gas of volume 546cm3 at 0oC is heated at constant pressure. Calculate the volume of the gas at 2oC.

550cm3

When a gas is allowed to expand without heat entering or leaving the gas, the gas is said to undergo an _____.

adiabatic expansion

Which of the following is dimensionless?

Strain
The work done by stretching a string is _____.

Zero

The unit of work is the unit of _____multiplied by the unit of distance.

force

A system that its boundary allows transfer of mass and energy into or out of the

system is known as___.

open system

A piece of stone has a mass of 80kg and a volume of 0.12m3. What is its density?

666.67 kg/m3

The radiant heat energy could be detected and measured by _____.

the thermopile

The _____ is an aggregate of point masses such as that the relative separation between any two points remains invariant.

it appears to lose weight

What happens to a body which is immersed in a fluid?

it appears to lose weight

The specific latent heat of vapourization of a liquid is the quantity of heat in joules required to change 1kg mass of the liquid at its _____to gas at the same temperature.

boiling point

Upthrust force can be explained in terms of the forces acting on the body _____.

due to the pressure acting on each of the surfaces of the body.

A stone weighs 450 N in air and 200 N in water. Compute the volume of the stone.

0.025 m3