مدونة المناهج السعودية

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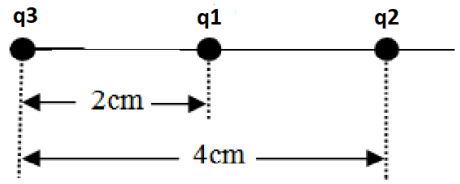
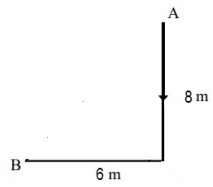
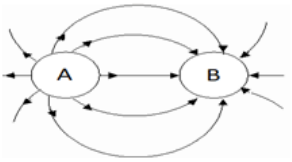
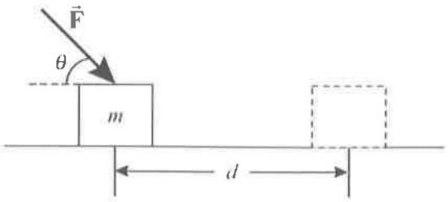
الموقع التعليمي لجميع المراحل الدراسية

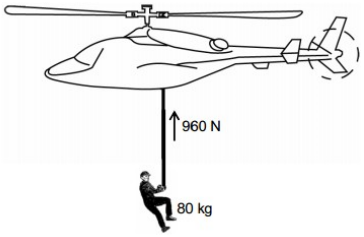
في المملكة العربية السعودية

Room temperature is about 20 degrees on the	* Fahrenheit scale * Celsius scale * Kelvin scale * Both Celsius and Fahrenheit scales
It is more difficult to measure the coefficient of volume expansion of a liquid than that of a solid because	* a liquid tends to evaporate * a liquid expands too little when heated * a liquid expands too much when heated * the containing vessel also expands
A car accelerates from initial velocity of 2 m/s to a final velocity of 10 m/s in 8 s. Calculate the acceleration of the car during the 8 s	* $1m/s^2$ * $3m/s^2$ * $10m/s^2$ * $0.5m/s^2$
The maximum force of a static friction between an object and a surface depends on	* the area of the contact surface * the weight of the object only * the normal force acting on the object only * the normal force acting on the object and the weight of the object
Calculate the electric field strength where a test charge of 2mC is repelled by a force of 2N	* 1000N/C * 1N/C * 0.004N/C * 4N/C
An object having a net charge of 24μC is placed in a uniform electric field of 610 N/C directed vertically. What is the mass of this object if it "floats" in the field?	* $1.49\times10^{-3}kg$ * 25.4kg * $1.49\times10^{3}kg$ * $5.4\times10^{-3}kg$
An object is thrown upward with a velocity of 15m/s. Find the total time when it back to the ground (g = 9.8 m/s^2	* 1.5s * 3s * 4s *5s
The vector A has an x component of A_x = 5.00 units and a y component of A_y = 5.00 units. Find the direction of this vector	* $\theta = 90°$ * $\theta = 30°$ * $\theta = 45°$ * $\theta = 60°$
The magnitudes of two vectors A and B are A = 8 units and B = 6 units. Find the largest value possible for the magnitude of the resultant vector R = A + B	* 14 * 8 * 6 * 4
If a sample is heated from T_1 to T_2, the temperature difference ΔT on the Celsius scale is	* greater than that on the Kelvin scale by 373 * less than that on the Kelvin scale by 273 * greater than that on the Kelvin scale by 273 * the same as that on the Kelvin scale

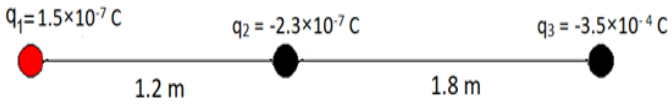
The two metallic strips that constitute some thermostats must differ in	*rate at which they conduct heat * length * mass * coefficient of linear expansion
To bring an object closer to the Earth, the change in the gravitational potential energy	* is always positive * can be negative or positive * There is no answer * is always negative
All of the following quantities are not vector quantities except	* Electric force * Temperature * Time interval * Mass
Three point charges lie along a straight line as shown in the figure, where q 1 = 6.00 μC, q 2 = 1.50 μC, and q 3 = -2.00 μC. Calculate the magnitude of the net electric force on q1 	*472N * 270N * 68N * 202N
Determine the average speed between A and B through 30 s 	* 0.3m/s * 0.46m/s * 0.24m/s * 0m/s
Races are timed to an accuracy of 1s. What distance could a person rollerblading at a speed of 5 m/s travel in that period of time	*0m * 2m * 5m * 0.2m
An object is released from rest and falls in the absence of air resistance. Which of the following is true about its motion?	*Its acceleration is constant *its acceleration is increasing * Its acceleration is zero * Its velocity is constant
32°F is the temperature of	*boiling of water * melting of mercury * expansion of gases * freezing of water
The unit of force in Newton which is equivalent to	* Kg. m/s * Km/s² * Joule * Kg. m/s²

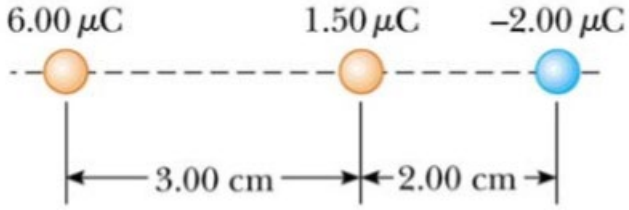
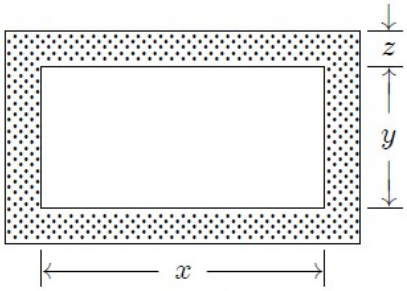
The charges A and B in the diagram below are  	* A is negative and B is positive * A is positive and B is negative * A is negative and B is negative *A is positive and B is positive
Two charges, one is 5 C and another is unknown but force between them is 6.75x1013 N and they are separated by 10 cm. What is the other charge?	***15C** ***5C** ***10C** ***25C**
A spring of force constant k = 440 N/m is stretched 1.0 cm by a suspended object having a mass of 1 kg, How much work is done by the spring as it stretches through this distance	0.022 J − 0.064 J −0.022 J ✓ − 0.046 J
A block of mass 1 kg is pulled 5 m along a frictionless horizontal table by a constant 20.0 N force directed 60.0° from the horizontal as shown in figure. Determine the work done on the block by the normal force exerted by table  	0 J ✓ 50 J 500 J 25 J
An 100 kg firefighter is trapped on top of a burning building. Calculate the firefighter's gravitational potential energy if the top of the building is 100m high (g = 9.8 m/s^2	109×10^3 J 98×10^3 J ✓ 50×10^3 J 54×10^3 J
If two objects are in thermal equilibrium with each other	* they cannot be undergoing an elastic collision * they cannot be moving * they cannot be at different temperatures * they cannot have different pressures

If the force of kinetic friction acting on a car was 100 N and the weight of the car is 1000 N, then the μ_k between the car and the road will be	* 0.1 * 1 * 0.3 * 0.06
A point in the xy plane has Cartesian coordinates (5.00, -5.00) m. Determine the polar coordinates (r, θ	* r = 7.07, θ = - 45° * r = 8.66, θ = 105° * r = 5, θ = 45° * r =2.1, θ = 30°
A point in the xy plane has Cartesian coordinates (6.00, 10.00) m. Determine the polar coordinates (r, θ	* r = 8.7, θ = 35° * r = 11.66, θ = 59° * r = 10.3, θ = 100° * r = 5.88, θ = 89°
A car covers 60.0 m in 6 s while uniformly slowing down to a final speed of 4 m/s. Find its initial speed	* 25m/s * 32m/s * 16m/s * 20m/s
Two positive point charges Q and 2Q are separated by a distance R. If the charge Q experiences a force of magnitude F when the separation is R, what is the magnitude of the force on the charge 2Q when the separation is 2R	* F/2 * F/4 * 2F * 4F
An electron is accelerated by a constant electric field of magnitude 300 N/C. Find the electron's speed after 1.00×10^{-8} s, assuming it starts from rest. ($m_e = 9.11 \times 10^{-31}$ kg), ($q_e = -1.6 \times 10^{-19}$ C)	* 5.27×10^{5}m/s * 3.29×10^{5}m/s * 5.27×10^{13}m/s * 4.10×10^{13}m/s
Your dog is running around the grass in your back yard. He undergoes successive displacements 3.50 m south and 15.0 m west. What is his distnace	* 15.4m * 13.3m * 11.2m * 18.5m
Your dog is running around the grass in your back yard. He undergoes successive displacements 3.50 m south and 15.0 m west. What is the resultant displacement	* 15.4m * 11.2m * 13.3m * 10.4m
The Cartesian coordinates of a point are given by (-2, y), and its polar coordinates are (4, 120°). Determine the value of y	* 3.46 * 4.65 * 1 * 2.5
The work done by a constant force F through the displacement Δr is maximum when	* F is at 145° from Δr * F is parallel to Δr * F is perpendicular to Δr * F is at 45° from Δr
The electron and proton of a hydrogen atom are separated (on the average) by a distance of approximately 5.3×10^{-11}m. Find the magnitudes of the electric force between the two particles. ($q_e = -1.6\times10^{-19}$C), ($q_p = 1.6\times10^{-19}$C)	* 8.2×10^{-8} N * 5.3×10^{-11} N * 8.2×10^{8} N * 5.3×10^{11} N

A very small ball has a mass of 5.00×10^{-3} kg and a charge of 4.00 μC. What magnitude electric field directed upward will balance the weight of the ball so that the ball is suspended motionless above the ground?	* 8.2×10^{2} N/C * 2.00×10^{-2} N/C * 1.22×10^{4} N/C * 5.11×10^{6} N/C
The SI unit of temperature is	* Kelvin and Celsius * Kelvin * Fahrenheit * Celsius
The coefficient of linear expansion of iron is 1 x 10^{-5} per °C. The total surface area of an iron cube, with an edge length of 5.0 cm, will increase by what amount if it is heated from 10°C to 60°C	0.15 cm^2 0.025 cm^2 0.075 cm^2 0.0125 cm^2
The temperature of 95°F equals	* 203°C * 35°C * 63°C * 127°C
A rescue helicopter hovers above a soldier as in the figure. The soldier is lifted vertically upwards at a constant speed of 6 m/s. The tension in the cable is 960 N. Assume that there is no sideways motion during the lift and air friction is ignored. What is the power of that helicopter 	5760 W 720 W 1200 W 6900 W
What happens when two like charges are placed near each other	* They attract each other * They repel each other * Nothing happens * They form an electromagnetic wave
The magnitude of the electric force between two protons is 2.30×10^{-26} N. How far apart are they? ($q_p = 1.6\times10^{-19}$C)	* 0.48 m * 3.10 m * 0.1 m * 0.022 m
A length of lead piping is 50.0 m long at a temperature of 16°C. When hot water flows through it the temperature of the pipe rises to 80°C. Determine the length of the hot pipe if the coefficient of linear expansion of lead is 29×10^{-6} K^{-1}	* 54.0928m * 555.0898m * 58.0900m * 50.0928m
Your cat is running around the grass in your back yard. He undergoes successive displacements 4 m south and 20.0 m west. What is the his distance	* 13.3m * 20.4m * 24m * 11.2m

A person walks first at a constant speed of 5.00 m/s along a straight line from point A to point B and then back along the line from B to A at a constant speed of 3.00 m/s. If it's her average speed over the entire trip is 4m/s, find it's average velocity over the entire trip	* 5 m/s * 8 m/s * 4 m/s * 2 m/s
What is the z component of the vector ($9\hat{i} - 7\hat{j}$) m	* 9m * 0m * 2m * -7m
The magnitude of the electric field at a distance of two meters from a negative point charge is 300 N/C. What is the magnitude of the electric field at the same location if the magnitude of the charge is doubled?	* 150N/C * 0N/C * 600N/C * $300\mathrm{N/C}$
Suppose it takes 20 s to walk 100 m straight toward the classroom. the magnitude of your average velocity is	* 1m/s * 0.2m/s * 10m/s * 5m/s
Suppose it takes 10s to walk 100 m toward the classroom and then you retun back 20 m in the same way. Find the magnitude of your average velocity	* 12m/s * 15m/s * 8m/s * 5m/s
A car having weight of 10000 N travels on a road with μ_k= 0.1, the force of kinetic friction acting on the care will be	* -10N * -1000N * -100N * 0N
Metal pipes, used to carry water, sometimes burst in the winter because	* ice expands when it melts * water expands when it freezes * metal contracts more than water * outside of the pipe contracts more than the inside
The zeroth law of thermodynamics allows us to define	* work * pressure * temperature * internal energy
$Kg.m^2/s^2$ is the unit of	* work * kinetic energy * potential energy * power
Sara walks to the shope and after shopping walks back home. if the distance between Sara's home and the shope is 300m, What is Sara's distance	* 150m * 600m * 300m * 0m

All of the following forces are not field forces except	* Pushing force * Tensile force * Gravitational force * Pulling force
An arrow is shot straight up in the air at an initial speed of 10.0 m/s. After how much time is the arrow moving downward at a speed of 5.00 m/s (g = 9.8 m/s^2	* 3s * 4.5s * 2.5s * 1.5s
The following three charges are arranged as shown. Determine the net force acting on the charge on the far right (q3 = charge 3).  	* 0.17 N * 5×10^{-2} N * 5×10^{2} N * -3.6×10^{-4} N
The Coulomb (C) is an unit of the following quantity	* Charge * Mass * Temperature * Electric force
A thermometric property is any physical property that changes measurably with	* temperature * pressure * mass * volume
373K is the temperature of	* boiling of water * expansion of gases * melting of mercury * freezing of water
If 100 N force exerts on a particle of 0.01 Kg, the acceleration in m/s^2 will equal to	* 10 * 0 * 10000 * 100
When adding vector B to vector A geometrically (or graphically) using the head to tail method, the resultant is drawn from____ to the ____	* Tail of B, head of A * Head of A, tail of B * Head of B, head of A * Head of B, tail of A
The gravitational force acting on a body of 10 Kg on Jupiter planet, is: (g_J = 25 m/s^2	* 250N * 0.25N * 25N * 2.5N

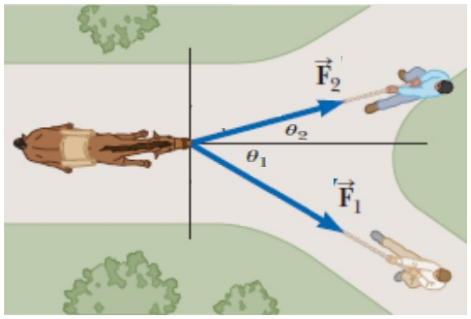
Calculate the magnitude and direction of the net force acting on the 6μC charge in the following figure  	* 46.7 N, to the left * 133 N, to the right * 133 N, to the left * 46.7 N, to the right
At the zero absolute temperature, the pressure of a gas is	* zero * doubled * maximum value * none of the above
The figure shows a rectangular brass plate at 0°C in which there is cut a rectangular hole of dimensions indicated. If the temperature of the plate is raised to 150°C  	* both *x* and *y* will increase * *x* will increase and *y* will decrease * *x* will decrease and *y* will increase * both *x* and *y* will decrease
The electron and proton of a hydrogen atom are separated (on the average) by a distance of approximately 5.3×10^{-11} m. Find the magnitudes of the gravitational force between the two particles ($m_e = 9.11 \times 10^{-31}$ kg), ($G = 6.67 \times 10^{-11}$ N m^2 kg^{-2}), ($m_p = 1.67 \times 10^{-27}$ kg)	* 3.6×10^{-47} N * 8.2×10^{-8} N * 8.2×10^{8} N * 3.6×10^{47} N
The static friction force between tow surfaces depends on	* the normal force and the coefficient static friction * the coefficient of static friction * the coefficient of kinetic friction * the normal force
A stone is thrown directly upward with speed 20m/s. Then it back dwonward to the ground. Find the total time for the stone when it back to the ground (g = 9.8 m/s^2	* 8s * 6s * 4s * 2s
What is the magnitude of a point charge that would create an electric field of 1.00 N/C at points 1.00 m away	* 3.6×10^{-10} C * 0.036C * 1.11×10^{-10} C * 0.001C

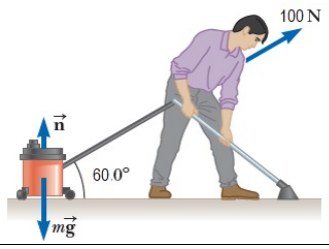
A particle undergoes three consecutive displacements $\vec{A} = (2\hat{i} + 3\hat{j} + 4\hat{k})\,cm$, $\vec{B} = (-4\hat{i} - 3\hat{j} + 6\hat{k})\,cm$ and $\vec{C} = (2\hat{i} - 10\hat{k})\,cm$ the magnitude of the resultant displacement is	* 22.8cm * 100cm * 12.4cm * 0cm
A car of mass 1500 Kg moves at a speed of 72 km/h, its kinetic energy is	* $7.2 \times 10^3\ J$ * $1072\ J$ * $300 \times 10^3\ J$ * $7200\ J$
The work done by a constant force to move an object a certain displacement depends on	* Force * all of them * angle between force and displacement * displacement
-273°C temperature corresponds	* 0°F * -273K * 0K * 273K
An electron, initially moving with a velocity of 3.0×10^4 (m/s), enters a region of a uniform electric field that is parallel to the x axis. The electron comes to rest after travelling a distance of 2.5 cm in the field. What is the electric field? Ignore gravity. ($q_e = -1.6 \times 10^{-19}$C), ($m_e = 9.11 \times 10^{-31}$ kg)	* 1 N/C * 0.5 N/C * 9.8 N/C * 0.1 N/C
A ball at a height of 30.0 m is thrown directly from rest downward. What is its speed at the floor (g = 9.8 m/s^2	* 15.8m/s * 16m/s * 22.8m/s * 24.24m/s
What is the z component of the vector ($10\hat{i} + 90\hat{j} - 30\hat{k}$) m	* 90m * 30m * -30m * 10m
A man has weight of 1000 N, his mass in Kg is: (g = 10 m/s^2	* 1000 * 100 * 0.1 * 10
Car is moving with speed 72km/h. Calculate its speed in unit m/s	* 2m/s * 5m/s * 20m/s * 0.05m/s

The polar coordinates of a point are r = 10 m and θ = 45°. What are the Cartesian coordinates (x,y) of this point	* x = 0.5 m, y = 0.5 m * x = 7.07 m, y = 7.07 m * x = 0.866 m, y = 0.866 m * x = 1 m, y = 1 m
An astronaut stands by the rim of a crater on the moon, where the acceleration of gravity is 1.62 m/s^2. To determine the depth of the crater, she drops a rock and measures the time it takes for it to hit the bottom. If the time is 6.3 s, what is the depth of the crater?	* 26 m * 14 m * 10 m * 32 m
A 2 Kg mass moving with initial velocity of 5 m /s , its velocity increased to 8 m/s , find the change in its Kinetic energy	* 6 J * 19.5 J * 39 J * 78 J
When the temperature of a brass disk is increased from -57°C to 43°C, its diameter increased to 80.00mm. If its coefficient of linear expansion is 2×10^{-5}/°C, what is its original diameter	* 78.40mm * 79.68mm * 80.16mm * 79.84mm
A silver plate has an area of 800 mm2 at 15°C. Determine the increase in the area of the plate when the temperature is raised to 100°C. Assume the coefficient of linear expansion of silver to be 19 × 10−6 K −1	* 6.584mm^2 * 2.584mm^2 * 5.034mm^2 * 1.590mm^2
A block weights 98 N initially at rest is pulled 2.0 m to the right along a horizontal, frictionless surface by a constant horizontal force of 10.0 N. The final speed of the block is	* 8m/s * 4m/s * 16m/s * 2m/s
Convert the normal human body temperature,98.6°F to equivalent temperatures on the Kelvin scale	* 37.0K * 310K * -20.6K * 300K
Which one of the following statements is true concerning the magnitude of the electric field at a point in space?	* It is a measure of the electric force per unit charge on a test charge * It is giving the magnitude of electric force between tow point charge * It is giving the magnitude of the acceleration of an object at a point in space * No answer is correct
A point charge of -4.00 nC is located at (0, 1.00) m. What is the magnitude of the electric field due to the point charge at (4.00, -2.00) m	* 2.22N/C * 1.15N/C * 1.44N/C * 0.86N/C

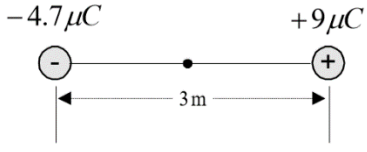
At what separation will two charges, each of magnitude 6.0 mC, exert a force of 0.70 N on each other?	* 6.8×10^{-1} m * 6.8×10^{1} m * 6.8×10^{2} m * 6.8×10^{-2} m
The unit of the coefficient of surface expansion is	* $(1/^{o}C)^{3}$ * $1/^{o}C$ * $mm^{3}/°C$ * $(1/^{o}C)^{2}$
How much work is done using a 500-watt microwave oven for 5 minutes?	* 250 J * 250000 J * 150000 J * 2500 J
A jet plane lands with a speed of 200 m/s and can slowing down at a maximum rate of -10 m/s^2 as it comes to rest. What is the time interval needed before it can come to rest	* 15s * 20s * 25s * 40s
A car travels on a road with μ_s=0.2, the acceleration with which the car will be stopped equal to: (g=10 m/s^2	* $-2m/s^2$ * $-1m/s^2$ * $-20m/s^2$ * $-0.5m/s^2$
An object moves with a constant acceleration of 5 m/s^2. Which of the following statements is true?	* The object moves 5 m each second * The object's velocity stays the same * The object's velocity increases by 5 m/s each second * The object's acceleration increases by 5 m/s^2 each second
A helicopter of mass 500 Kg is raising up at a constant speed of 15 m/s. What is the average power delivered by its motor (g = 9.8m/s^2	* 73500 W * 7500 W * 515×10^{3} W * 5.15×10^{3} W
To determine the height of a bridge above the water, a person drops a stone and measures the time it takes for it to hit the water. If the time is 2.3 s, what is the height of the bridge? (g= 9.8 m/s^2	* 17 m * 10 m * 34 m * 26 m
Obtain expressions in component form for the position vectors having the polar coordinates (12.8 m, 150°	* x = 1 m, y = 0.866 m * x = 0.7 m, y = 1.5 m * x = -11 m, y = 6.4 m * x = 0.5 m, y = 0.5 m
The coefficient of linear expansion of certain steel is 0.000012 per °C. The coefficient of volume expansion, in $(°C)^{-1}$, is	* 0.000012 * 3×0.000012 * $(0.000012)^{3}$ * $(4/3)\pi^{3}\times0.000012$

One kilowatt-hour (kWh) is the energy transferred in 1 h at the constant rate of 1 kW = 1 000 J/s. The amount of energy represented by 1 kWh is	* $1.20 \times 10^6 J$ * $3.60 \times 10^6 J$ * $360 \times 10^6 J$ * $6.0 \times 10^6 J$
An object experiences no acceleration. Which of the following cannot be true for the object	* Forces act on the object, but the forces cancel * None answers is correct * A single force acts on the object * No forces act on the object
The gravitational force, acting on a body of 10 Kg, is: (g = 9.8 m/s^2	* 98N * 0N * 1N * 10N
If the force is 4 newtons between two charged spheres separated by 3 centimeters, calculate the force between the same spheres separated by 6 centimeters	* 8N * 1N * 4N * 2N
In S.I, the unit of gravity acceleration is	* m^2/s^2 * m/s^2 * m/s * s/m^2
According to Newton's _____ law of motion, an object with less mass will experience a greater acceleration if a constant force is applied to the object.	* Second * First * Fourth * Third
An object with positive charge is placed in a region of space where the electric field is directed vertically upward. What is the direction of the electric force exerted on this charge	* It is up * There is no force * The force can be in any direction * It is down
An electron in a cathode-ray tube accelerates uniformly from 1.00 x10^4 m/s to 5.00 x10^6 m/s over 0.01 m. In what time interval does the electron travel this 0.01 m	* 9.3x10^{-9}s * 3.99x10^{-9}s * 1.3x10^{-9}s * 2.6x10^{-9}s
Starting from the origin, a car travels 4 km east and then 7 km west. What is the traveled distance of the car from the initial point?	* 11 km * 3 km * 7 km * 4 km
The rule for the calculation of power is:	* energy × time * work × time * work / time * energy / time

The temperature reading at which the Kelvin scale agrees with the Fahrenheit scale is	* 614 * 301 * 574 * 232
The linear coefficient of expansion of copper is 17×10^{-6}/°C. If a copper penny of radius 0.5cm is heated by 100°C, what the increase in the surface area of one of its faces	* $2.7\times10^{3}\ cm^2$ * $2.7\times10^{-3}\ cm^2$ * $17\times10^{-4}\ cm^2$ * $17\times10^{-3}\ cm^2$
The coefficient of linear expansion is	* Constant for the same material * Constant for all solid materials * Constant for all solid and liquid materials * Changing with heat
The vector **A** has an x component of A_x = 8.00 units and a y component of A_y = 4.00 units. Find the direction of this vector	* θ = 89° * θ = 45.5° * θ = 26.5° * θ = 63.4°
The polar coordinates of a point are r = 8 m and θ = 150°. What are the Cartesian coordinates (x,y) of this point	* x = 1 m, y = -0.7 m * x = -6.9 m, y = 4 m * x = -0.5 m, y = 1 m * x = -1.5 m, y = -2 m
The magnitude of the electric field at a distance of two meters from a negative point charge is E. What is the magnitude of the electric field at the same location if the magnitude of the charge is doubled?	* E/2 * E/4 * 4E * 2E
Two persons are pulling a horse as shown in the figure, if the angles of the two robes are $\theta_1 = 60^0$ and $\theta_2 = 45^0$ and the force F_1=20 N, F_2=30 N. What is the work done to move the horse a distance of 10 m  	500 J 300 J 312.13 J ✓ 512.15 J
The Cartesian coordinates of a point are given by (5, 2), and its polar coordinates are (r, 21.8°). Determine the value of r	* 2.9 * 5.6 * 5.3 * 6.1

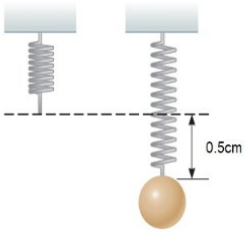
An elevator car has a mass of 1500 kg and is carrying passengers having a combined mass of 300 kg. A constant friction force of 4000 N retards its motion upward. What power delivered by the motor is required to lift the elevator car at a constant speed of 3.00 m/s	$5.6 \times 10^4\ W$ $1.8 \times 10^4\ W$ $6.5 \times 10^4\ W$ ✓ $3.5 \times 10^4\ W$
A cord holds stationary a block of mass m = 8.5 kg on a frictionless plane that is inclined θ = 30°, the tension in the cord T equals	* 83.3 N * 41.65 N * 53.14 N * 72.14 N
The Newton is an unit of the following quantities except	* The tensile Force * The mass * The weight * The electric force
-40°C corresponds	* -40°F * 40°F * -40K * 0.4°F
hat is the gravitational force of attraction between two electrons held one meter apart in a vacuum? ($m_e = 9.11 \times 10^{-31}$ kg), (G = 6.67×10^{-11} N m^2 kg^{-2})	* 2.3×10^{-28} N * 5.5×10^{-71} N * 7.3×10^{19} N * 6.1×10^{-41} N
What is the magnitude of the electric field due to a 6 nC charge at a point located 0.025 m from the charge?	* 86000N/C * 0.024N/C * 0.0069N/C * 20000N/C
A man cleaning a floor pulls a vacuum cleaner with a force of magnitude F = 100 N at an angle of 60.0° with the horizontal. Calculate the work done by the force on the vacuum cleaner as the vacuum cleaner is displaced 5.00 m to the right 	50 J 250 J ✓ 500 J 1250 J
A cyclist of mass 40 kg exerts a force of 250 N to move his cycle with acceleration of 4 ms^{-2}, the force of friction between road and tires will be	* 60N * 90N * 160N * 250N

A car is traveling with a constant speed of 20 Km/h, then the resultant force acting on it will be	* 0N * 2N * 200N * 20N
Force that produces an acceleration of 1 m/s^2 in a body of mass of 1 kg equal to	* 2N * 0N * 1N * 3N
When an object is exerted by two forces at the same direction of 10 and 15 N, the net force in Newton will be	* 25N * 5N * 0N * 150N
In S.I, the unit of instantaneous velocity is	* m/s * m.s * m/s^2 * $m.s^2$
The value of the force constant k of a spring is a measure of the ..... of that spring	* length * number of turns * diameter * stiffness
The physical property which determines the direction of heat transfer between two contacted objects is the	* work * energy/time * temperature * heat capacity
The polar coordinates of a point are r = 2 m and θ = 60°. What are the Cartesian coordinates (x,y) of this point	* x = 3 m, y = 3.7 m * x = 0.866 m, y = 0.5 m * x = 1 m, y = 1.7 m * x = 0.5 m, y = 0.7 m
The vector **A** has an x component of A_x = 20.0 units and a y component of A_y = 40.0 units. Find the direction of this vector	* θ = 26.5° * θ = 93.4° * θ = 63.4° * θ = 23.8°
A car with a mass of 850 kg is moving to the right with a constant speed of 1.44 m/s. What is the total force on the car	* 100N * 0N * 105N * 9.8N
An object moves along the x axis according to the equation x(t) = (2.00t2 - 1.00t + 3.00) m. Determine the instantaneous velocity at t = 2.00 s	* 4m/s * 2m/s * 7m/s * 5m/s
What is the gravitational force of attraction between two electrons held one meter apart in a vacuum? ($m_e = 9.11 \times 10^{-31}$ kg), ($G = 6.67 \times 10^{-11}$ N m^2 kg^{-2})	* 5.5×10^{-71} N * 7.3×10^{19} N * 2.3×10^{-28} N * 6.1×10^{-41} N

Two spheres are made of the same metal and have the same radius, but one is hollow and the other is solid. The spheres are taken through the same temperature increase. Which sphere expands more	* They expand by the same amount * hollow sphere * solid sphere * They not expand at all
Thermocouple thermometers are based on	* change the color of an object by heat * change in the electric potential difference by heat * change of mass by heat * expansion of volume of liquids by heat
A length of lead piping is 50.0 m long at a temperature of 16°C. When hot water flows through it the temperature of the pipe rises to 80°C. Determine the length of the hot pipe if the coefficient of linear expansion of lead is $29 \times 10^{-6}\ K^{-1}$	* 555.0898m * 54.0928m * 50.0928m * 58.0900m
Joules per second (J/s) is the unit of	* Power * Weight * Work * Mass
The Cartesian coordinates of a point are given by (x, 5), and its polar coordinates are (5, 90°). Determine the value of x	* 0.5 * 0.866 * 1 * 0
A cord holds stationary a block of mass m = 8.5 kg on a frictionless plane that is inclined θ = 30°, the tension in the cord T equals:	* 72.14 N * 53.14 N * 83.3 N * 41.65 N
The polar coordinates of a point are r = 3 m and θ = 30°. What are the Cartesian coordinates (x,y) of this point	* x = -8.9 m, y = 9.6 m * x = 2.6 m, y = 1.5 m * x = 60.5m, y = 78 m * x = 2.34 m, y = 7.98 m
Find the total electric field along the line of the two charges shown in the figure at the point midway between them 	* $2.81\times10^{4}N/C$ * $5.46\times10^{4}N/C$ * $1.87\times10^{4}N/C$ * $3.59\times10^{4}N/C$
A charge Q exerts a 1.2 N force on another charge q. If the distance between the charges is doubled, what is the magnitude of the force exerted on Q by q	* 2.4N * 0.6N * 0.3N * 1.2N

A 10.0 kg block initially at rest is pulled to the right along a horizontal, frictionless surface by a constant horizontal force exerts work 20 J. Find the final speed of the block	12 m/s 2 m/s ✔ 10 m/s 22 m/s
The vector **A** has an x component of A_x = 9.0 units. Find the A_y of y compoenet if the resultant of the vector R = 12.73 unit	* A_y =20 * A_y =9 * A_y =10 * A_y =4
A particle undergoes two consecutive displacements $\vec{A}=(15\hat{i}-15\hat{j})cm \quad \vec{B}=(-10\hat{i}+10\hat{j})cm$ the magnitude of the resultant displacement is	* 0cm * 30cm * 5cm * 7.07cm
A particle undergoes two consecutive displacements $\vec{A}=(5\hat{i}+5\hat{j})cm \quad \vec{B}=(10\hat{i}-10\hat{j})cm$ the direction of the displacement is	* θ = - 18.4° * θ = 60° * θ = 90° * θ = - 20°
One charge of 2.0 C is 1.5m away from a –3.0 C charge. Determine the force they exert on each other	* 5.4×10^{10} N * 2.4×10^{10} N * 2.66 N * 3.6×10^{10} N
Suppose object C is in thermal equilibrium with object A and with object B. The zeroth law of thermodynamics states	* that C will always be in thermal equilibrium with both A and B * that A is in thermal equilibrium with B * that A cannot be in thermal equilibrium with B * that C must transfer energy to both A and B
If a weightlifter lifts 2000 newtons to a height of 2 metres in 4 seconds, how powerful is he?	* 2 watt * 1 watt * 2 kilowatt * 1 kilowatt
An object moves along the x axis according to the equation x(t) = ($1.00t^2$ - 1.00t + 1.00) m. Determine the average speed at t = 1.00 s	* 2m/s * 1m/s * 0m/s * 3m/s
Electric charge placed on uniform electric field equal 1N/C, if the electric force F exerted on the charge ($F=10^{-9}$ N). Find the magnitude of this charge	* 10^{9}C * 10^{-10}C * 10^{10}C * 10^{-9}C
On a day when the temperature is 10°C, what is the temperature in Kelvin	* 273.15 * 253.15 * 293.15 * 283.15

An object is thrown upward with a velocity of 15m/s. Find the maximum height before it return to the ground (g = 9.8 m/s^2	* 11.47m * 44m * 12.5m * 30m
The magnitudes of two vectors A and B are A = 8 units and B = 6 units. Find the smallest value possible for the magnitude of the resultant vector R = A + B	* 8 * 2 * 6 * 0
What is the speed of a 55 kg woman running with a kinetic energy of 412.7J	* 3.87 m/s * 15 m/s * 4 m/s * 2.7 m/s
Fahrenheit and Celsius scales agree numerically at the reading of	* -40 * 0 * 273 * 301

If a spring is stretched 0.5 cm by a suspended ball having a mass of 0.50 kg, as shown in figure. What is the force constant of the spring (g= 9.8 m/s^2 	980 N/m
A point in the xy plane has Cartesian coordinates (2.00, -2.00) m. Determine the polar coordinates (r, θ	r = 2.8 , θ=45
Jamal walks 1800 m away from home in 30min. He then turns around and walks back home along the same path, also in 30min. Calculate Jamal's average speed	1m/s
The vector A has an x component of Ax = -2.00 units and a y component of Ay = 2.00 units. Find the magnitude of this vector	2.8
What is the x component of the vector ($3\hat{i}+20\hat{j}-10\hat{k}$) m	3m

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