CP7-8 Revision Mat

Objects affecting each other

Identify an example of a contact force

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Identify an example of a non-contact force

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Explain why the gravitational forces between the Earth and the moon are an example of an action-reaction pair.

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State three examples of force fields

1.…………………………………………………………………………………….

2.……………………………………………………………………………………….

3.……………………………………………………………………………………….

Explain what will happen if two identically charged plastic rods are suspended next to each other

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Draw a diagram to show two objects attracting each other

Draw a diagram to show two objects repelling each other

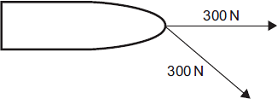
Vector Diagrams

Draw a free body force diagram to show 400N of weight, 400N of upthrust, 100N of drag and 500N of thrust.

Calculate the resultant force and state the direction

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Use the diagram to determine the size of the resultant force



Resultant force ……………………………………………N

A skydiver jumps from an aeroplane. There is a resultant vertical force of 300N on the skydiver.

There is a horizontal force from the wind of 60N.

Use graph paper to draw a vector diagram to determine the magnitude and direction of the resultant force on the skydiver

Work and Power

State the equation that links force, distance and work done

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Calculate the work done when Jim pushes a box 10m with 200N of force

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Calculate the force when a crane uses 500kJ to lift steel bars 30m high.

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State the equation that links time, power and work done

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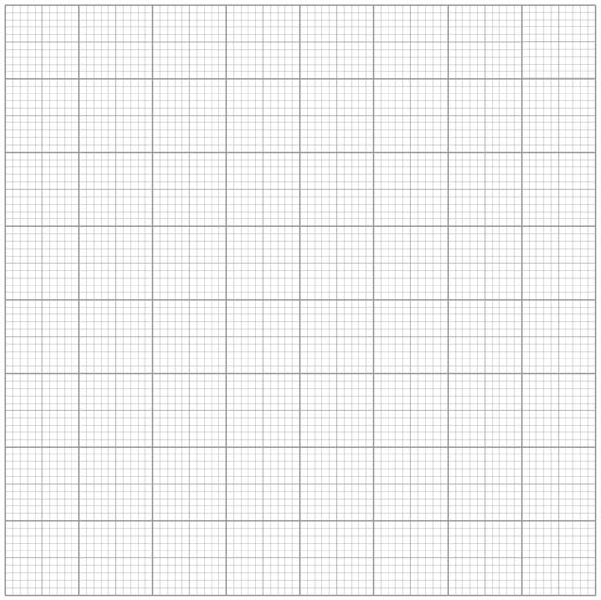
State the unit of power ……………………………………………..

Calculate the power if 1000J of energy is needed to run up the stairs in 10 seconds

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A man takes 10 seconds to push a car with a force of 1kN a distance of 10m. Calculate the power of the man.

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