Name: _____

Period: _____

IPC Physics Final Review 1

mv = m *times* v

F/a = F _____ a

$T_2 + T_1 = T_2$ _____ T_1

mv = m _____ v

$\Delta D/\Delta T = \Delta D$ _____ ΔT

MA = _____	8 kgm/s
F or F_w = _____	8 Ω
d or λ = _____	8 w
W or E= _____	8
R = _____	8 sec
I = _____	8 N
p = _____	8 m
V = _____	8 A
P = _____	8 m/s^2
f = _____	8 V
T = _____	8 Hz
a = _____	8 J

N

S

___

___

If the two magnets are ***repelling*** each other, label N and S on the second magnet.

A car travels 88 meters in 11 seconds. Find the car's speed.

You travel from Maine (100 miles away) to Vermont (300 miles away), in 4 hours. Calculate your speed.

A bike goes 12 m/s for 6 seconds. Calculate how far the bike traveled.

A plane stops from 300 mph in 15 seconds. Calculate the planes acceleration.

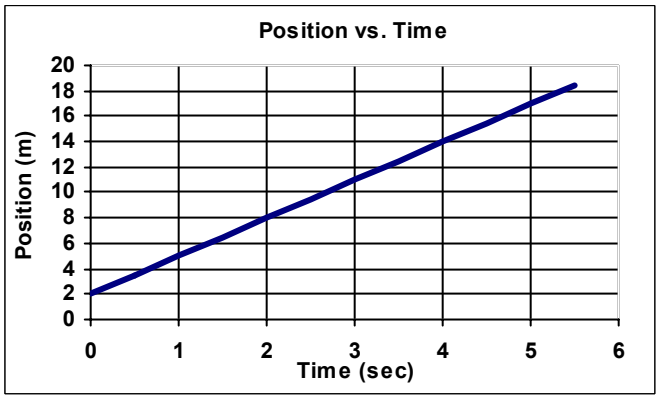
Experimental or Control Variables:

Variables that you keep the same in an experiment: *You are studying how the amount of salt affects the boiling point of water.*

A variable that you are studying in an experiment: The amount of salt would be:

You have only one of these: The type of pot used would be:

You can have many of these: The thermometer would be:



Where was the object at 4 seconds? _____

When did the object reach 8 meters? _____

Find the slope of the graph (must show work)

What does the slope you just found stand for? _____

If you drop a full bottle of water and an empty bottle of water, which one hits the ground first and why?

Name the six steps of the Scientific Method:

Name the six Simple Machines:

If you go to another planet what would change? Weight or mass?

If you were in space what would stay the same? Weight or mass?

Which of Newton's Three Laws Applies?

___ A paddle-wheel boat pushes on the water and the water pushes back to move the boat.

___ Fighter pilots feel massive amounts of force when their planes turn quickly.

___ A rolling ball hits your leg hard to stop.

Using g = 10 m/s^2, find the weight of a 3 kg mass.

A 35 kg bike accelerates at 5 m/s^2. With what force was the person pedaling?

If 40 N is pushing to the right and friction is 10 N, find the net force and acceleration of a 6 kg object.

Copyright © 2004, C. Stephen Murray

Name: _____

Period: _____

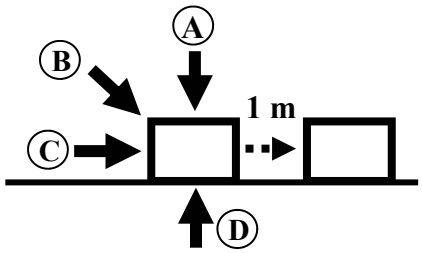
Final Review 1

A 5 kg ball is thrown 11 m/s. Find momentum.

What is the Law of Conservation of Momentum?

What is the Law of Conservation of Energy?

A ball on the top of a hill has _____ energy; when it falls down the energy has been transformed into _____ energy. The Law of Conservation of Energy says that the amounts of these two energies are _____.



Which of the four forces are doing work on the object?

Why?

1. Conduction; 2. Convection; 3. Radiation

___ From electromagnet radiation (light rays).

___ Putting your hand on a hot car.

___ In a pot of water.

___ Liquids and gases become less dense when hot and rise, causing currents.

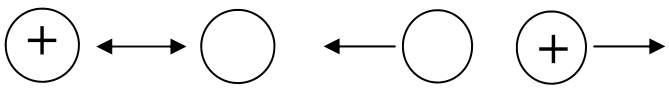
Does heat rise? What does rise?

What is thermal equilibrium?

Heat always moves from hot to cold OR cold to hot?

What are the charges of the second objects?

attracting repellling



What is electricity?

What is the difference between parallel and series circuits?

Where does light come from?

Harmonic (H), Linear (L), or Wave (W) motion?

Person running: __	Ocean waves: ___	X-rays: _____
The moon: _____	A swing: _____	Music: _____
Pendulum: _____	A car moving: ___	Bird flying: _____

Thermal; Nuclear; Radiant; Mechanical; Chemical; Electrical

___ An acorn in a tree.

___ Energy from a wall power plug.

___ Something hot.

____ Fusion in the sun.

____ The light of the sun.

____ In a piece of wood.

A 8 kg cart is rolling 5 m/s. Calculate kinetic energy.

_____

A 30 N rock is moved 4 meters. How much work is done?

How much energy was used to move the rock?

If done in 3 seconds, how much power was used?

_____

A 2 kg rock on a 6 meter ledge has how much potential energy?

How much kinetic energy can it have if it falls?

What's the total charge of an object with 14 electrons and 6 protons?

An atom that loses electrons becomes positive/negative.

An atom that gains electrons becomes positive/negative

Increases (I)
Or
Decreases (D)

Increasing resistance _____ current

Decreasing resistance _____ current

Increasing voltage _____ current

Decreasing voltage _____ current

How big a battery is needed to produce 2 amps through a 4 ohm light bulb?

A 12 volt battery produces what current through a 6 Ω resistor?

Copyright © 2004, C. Stephen Murray