

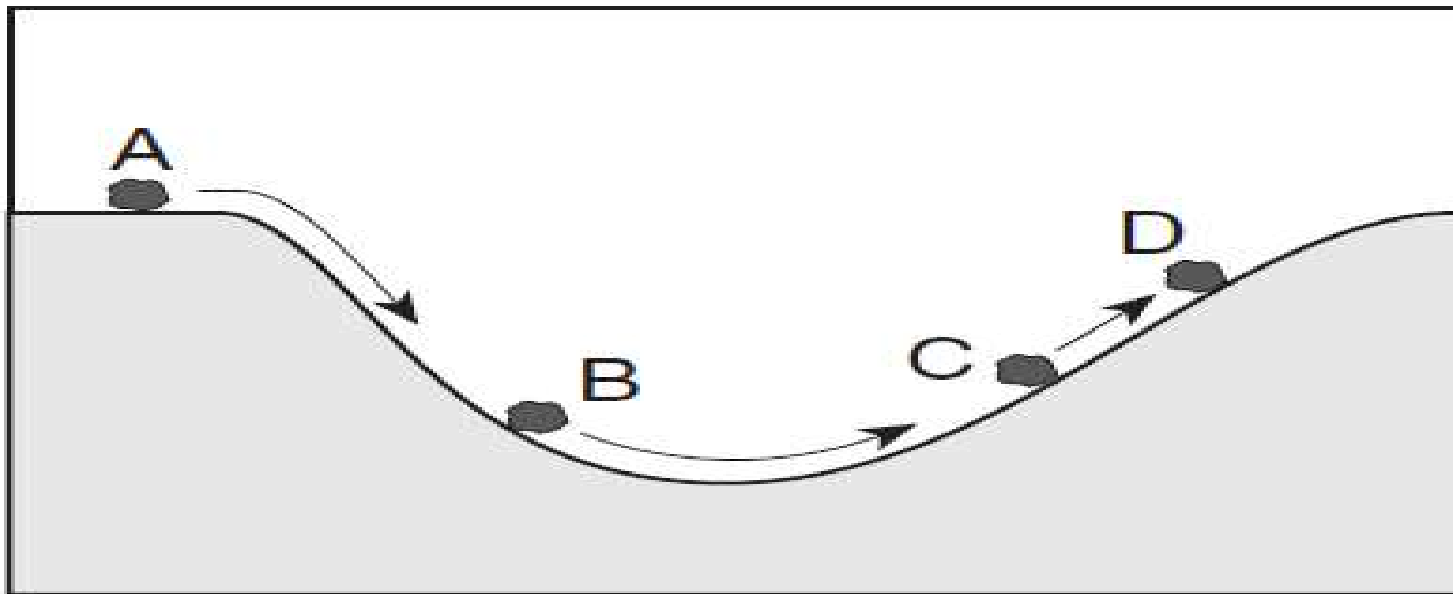
Jeopardy

Energy Review for Quiz 1

It's Kinetic	You've got Potential	Are you my type?	Save the Planet	Fossil Fuel
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>

Question 1 - 100

The diagram below shows a boulder rolling down a hill into a valley and then up the opposite hill.



At which position does the boulder have the greatest kinetic energy?

- (1) *A*
- (2) *B*

- (3) *C*
- (4) *D*

Answer 1 – 100

- What is position B?



Question 1 - 200

- The word kinetic actually means this....

Answer 1 – 200

- What is “in motion”



Question 1 - 300

- The Law of Conservation of Energy states that.....

Answer 1 – 300

- What is , Energy cannot be created or destroyed, but can be transformed?



Question 1 - 400

- A wind turbine is an example of this form of Kinetic Energy

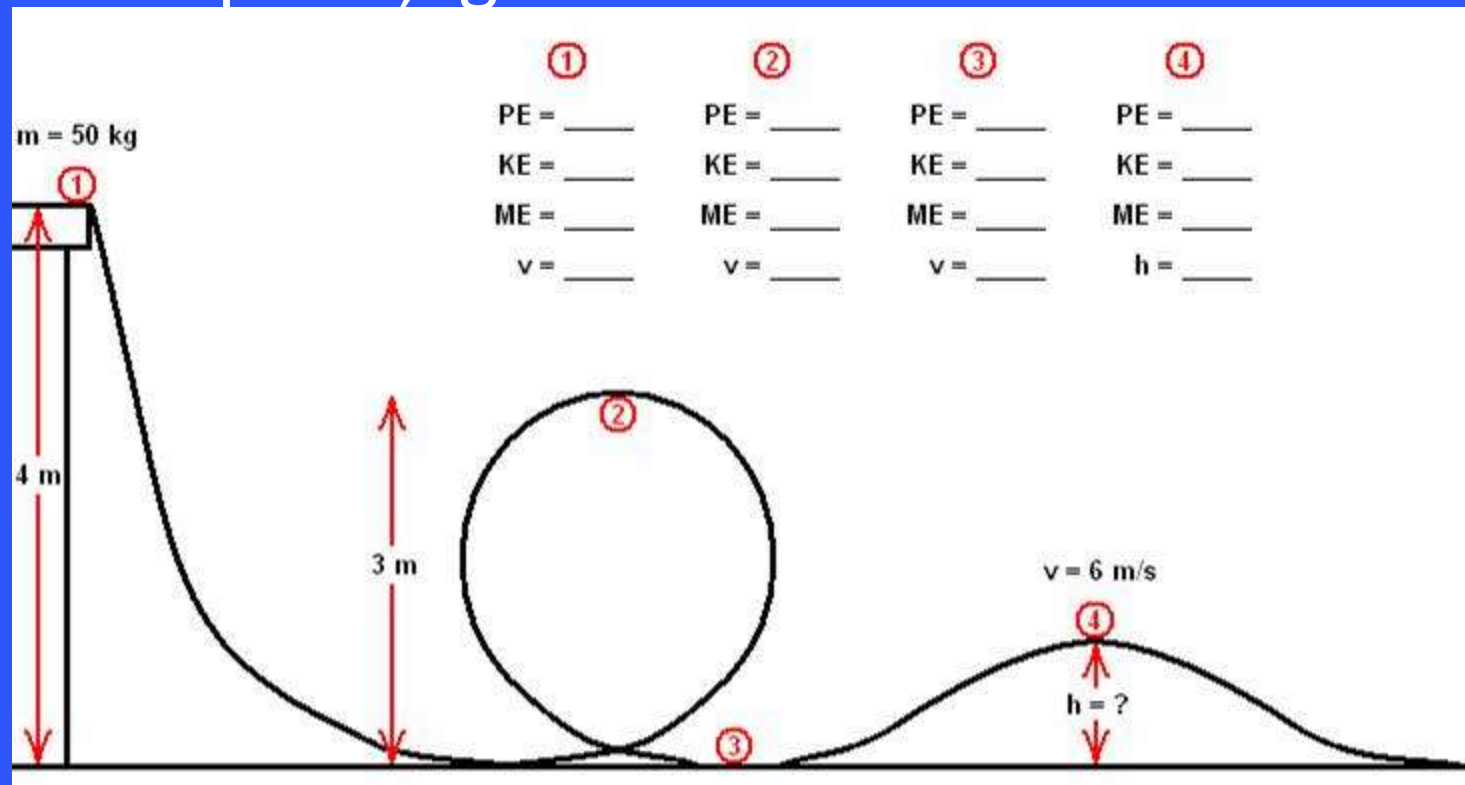
Answer 1 – 400

- What is mechanical energy or motion energy?



Question 1 - 500

- A rollercoaster has the most kinetic energy at which point, ignore the numbers...



Answer 1 – 500

- What is the bottom of the first hill?



Question 2 - 100

- A diver on a diving board has this type of potential energy

Answer 2 – 100

- What is gravitational potential energy?



Question 2 - 200

- Potential energy can be defined as this

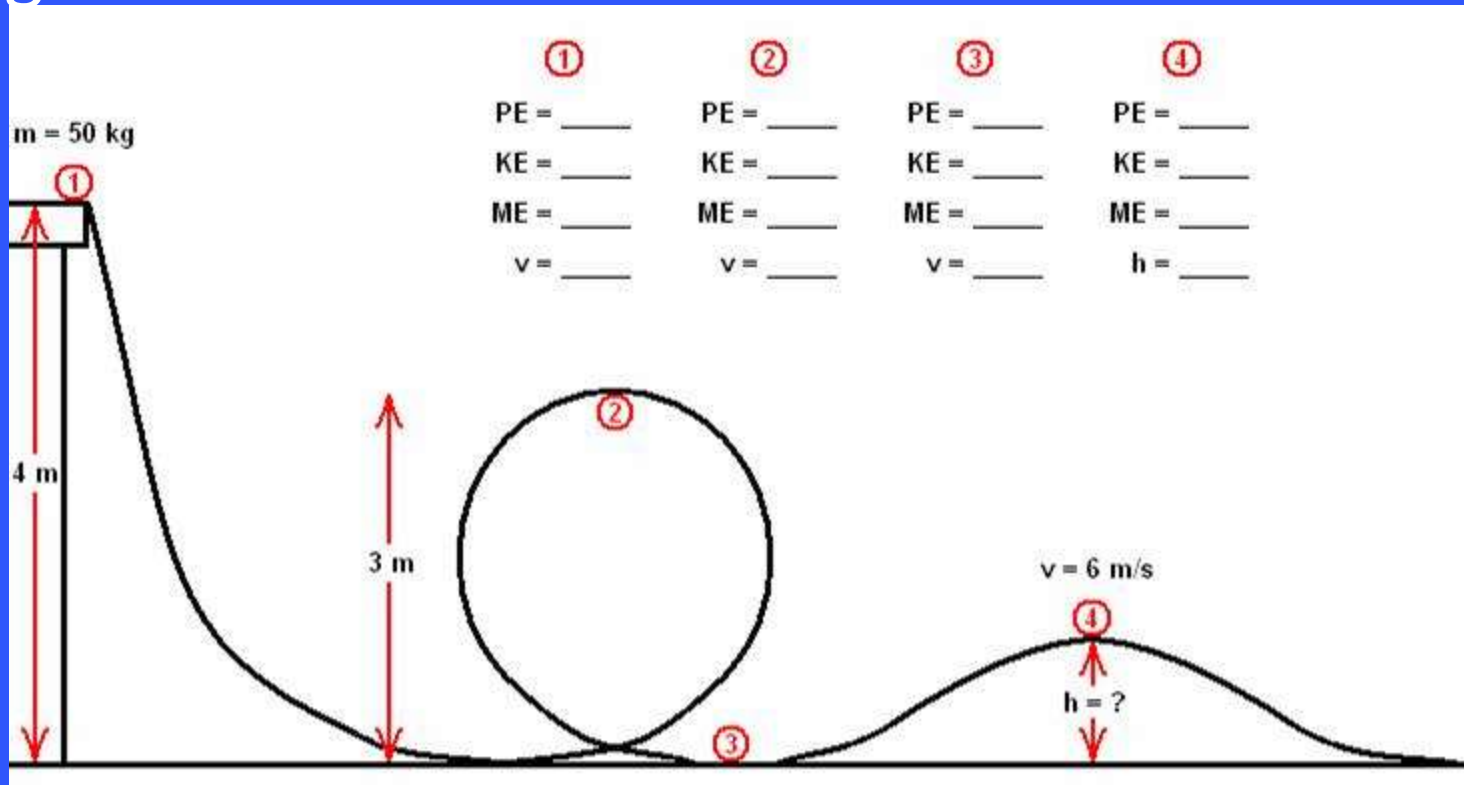
Answer 2 – 200

- What is stored energy? or
- What is $\text{mass} \times \text{height} \times \text{gravity}$?



Question 2 - 300

- This is where the potential energy is the greatest...



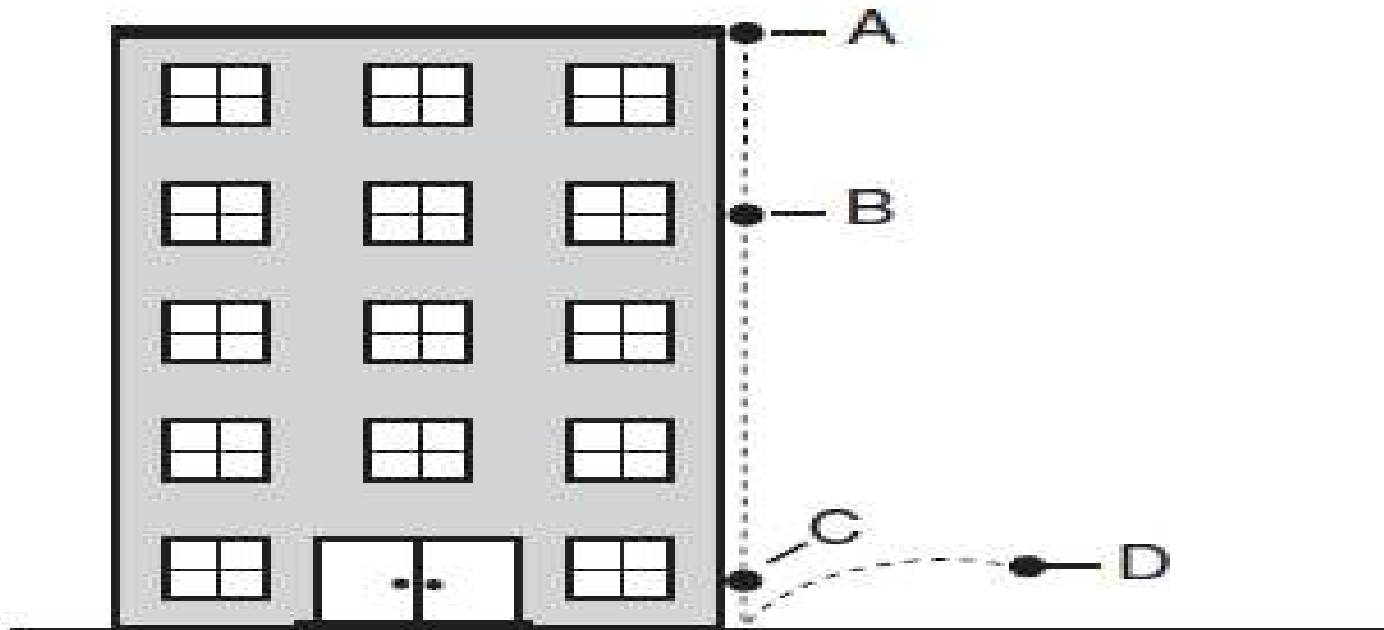
Answer 2 – 300

- What is at the top of the first hill? or
- What is position 1?



Question 2 - 400

A ball is dropped from the roof of a building. Points *A*, *B*, *C*, and *D* in the diagram below represent positions of the ball as it falls.



At which position will the ball have the greatest kinetic energy?

- (1) *A*
- (2) *B*

- (3) *C*
- (4) *D*

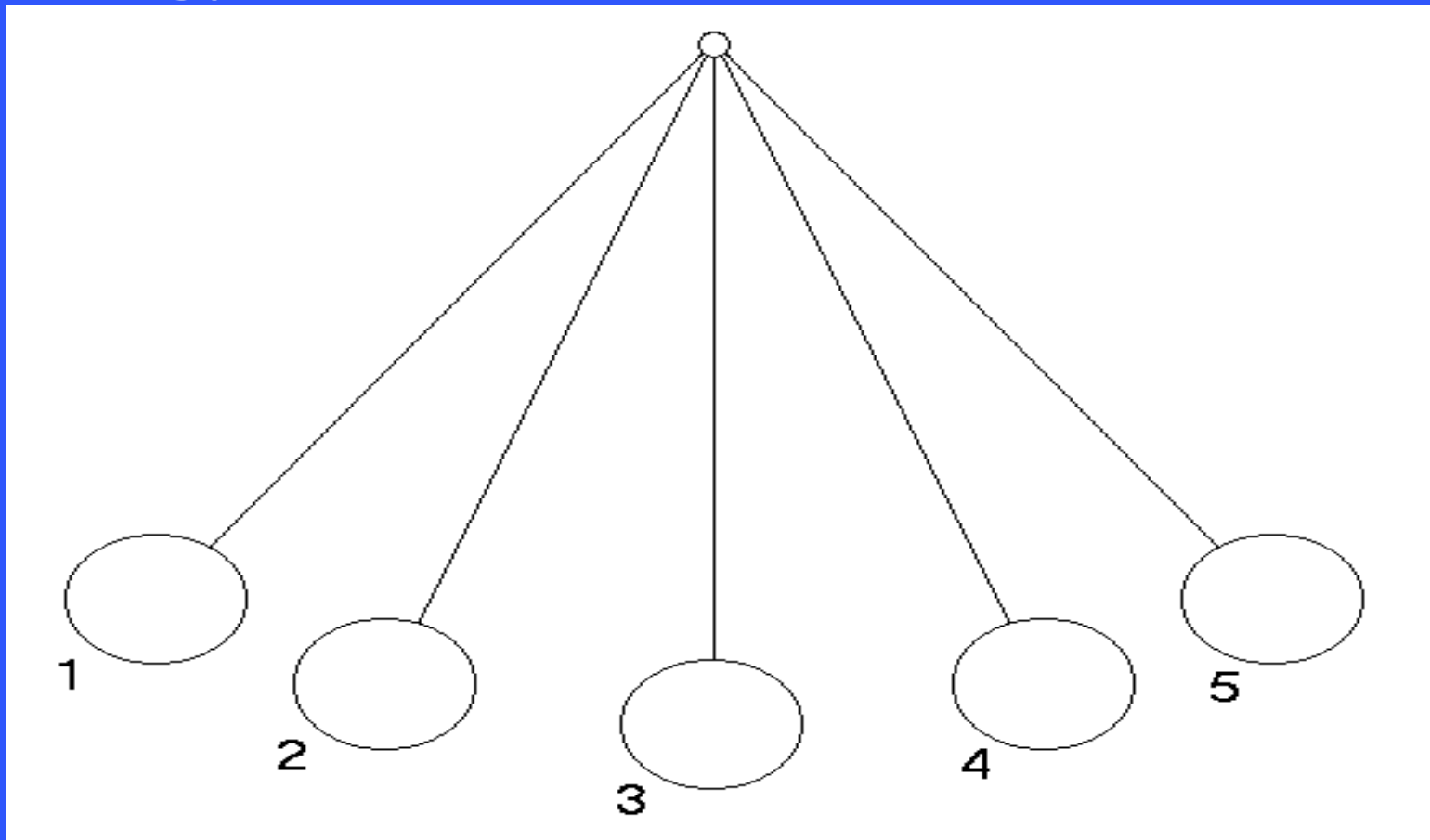
Answer 2 – 400

- What is position C?



Question 2 - 500

- The bob position which has the least potential energy is.....



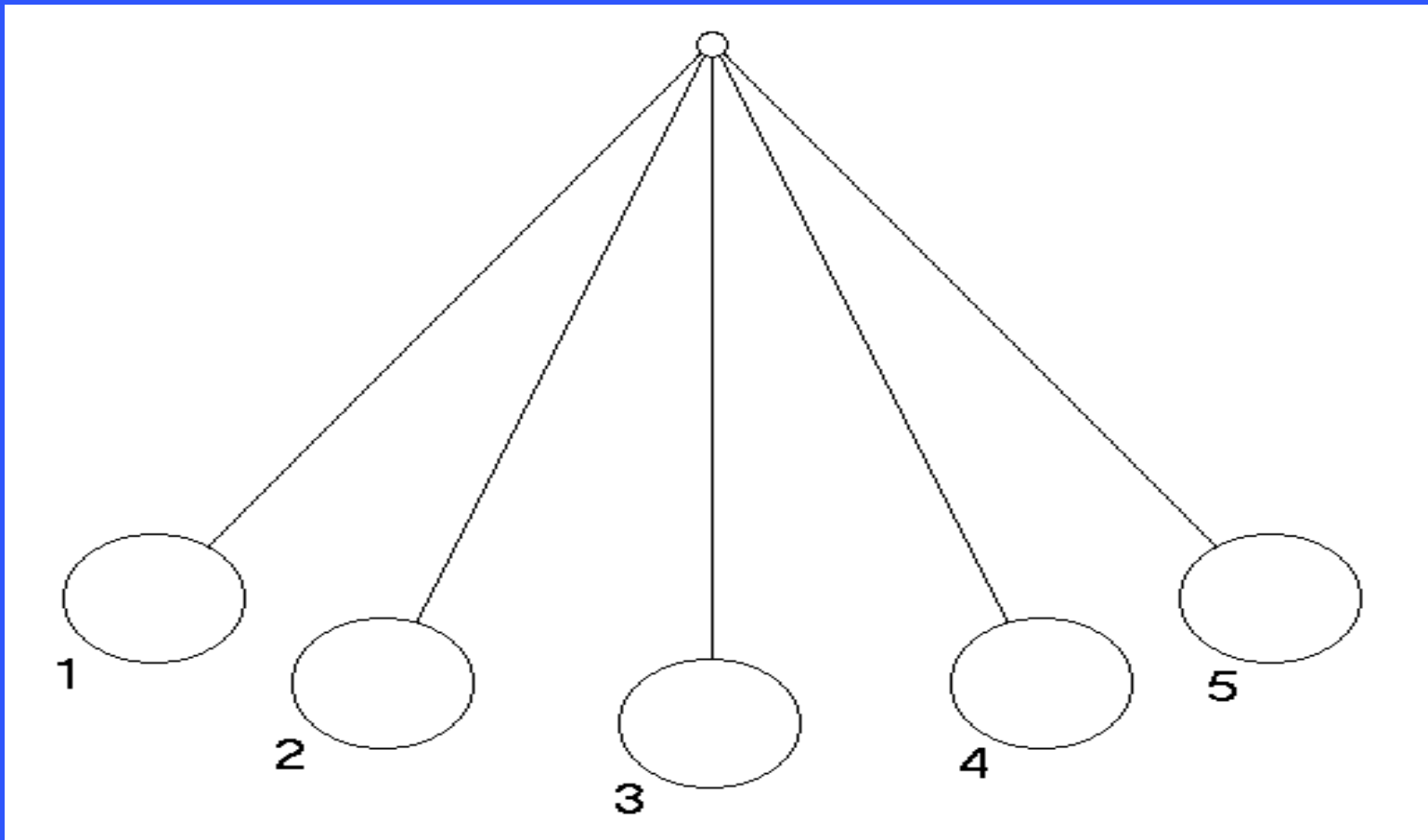
Answer 2 – 500

- What is position (#3)?



Question 3 - 100

- At which bob position can it said that KE is clearly decreasing while PE is clearly increasing.....



Answer 3 – 100

- What is position (#4)?



Question 3 - 200

- A hairdryer includes several energy transformations.....



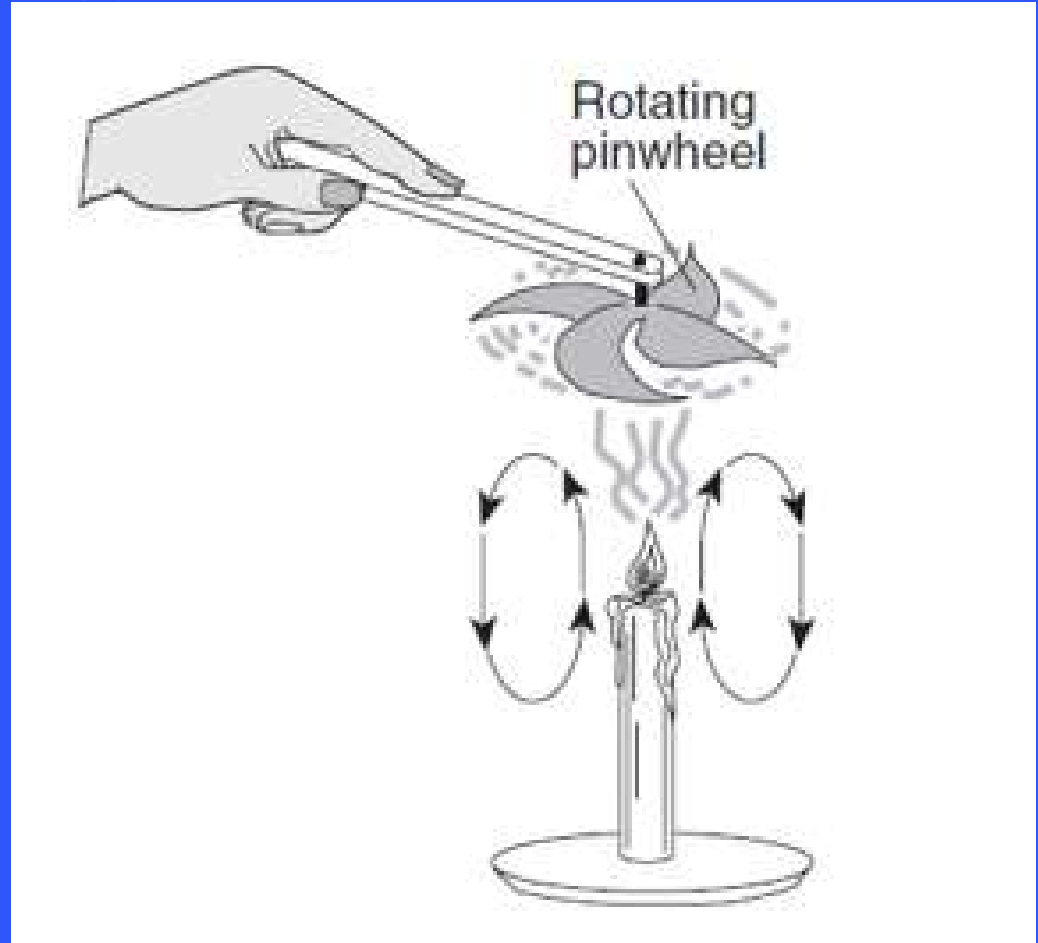
Answer 3 – 200

- What is Electric → Heat → Sound?



Question 3 - 300

List several of the energy transformations seen here.



Answer 3 – 300

- What is thermal to mechanical energy?



Question 3 - 400

- Sound is an example of this type of energy

Answer 3 – 400

- What is kinetic energy?



Question 3 - 500

- Einstein's Theory of Relativity $E=MC^2$ and the Law of Conservation of Energy *actually* agree with one another on this.....

Answer 3 – 500

- What energy can neither be created nor destroyed but merely transformed?
- In fact according to *Relativity* energy and mass are readily transformed back and forth to one another as well.



Question 4 - 100

- Geothermal energy is considered to be this type of energy resource....

Answer 4 – 100

- What is renewable?



Question 4 - 200

- Hydroelectric power takes advantage of this form of energy to generate electricity.

Answer 4 – 200

- What is the gravitational potential energy of falling water being transformed into kinetic to rotate turbines within a dam?



Question 4 - 300

- Photovoltaic or solar cells which harness the energy of the sun are great do to these factors....

Answer 4 – 300

- What is they are reliable when the sun is shining, don't require high maintenance, don't produce pollutants and/or one of the fastest growing natural resource industries?



Question 4 - 400

- Geothermal transforms thermal energy deep in the earth into electrical by.....

Answer 4 – 400

- What is circulating cool water down, which then rises in the form of steam to power a generator or turbine?



Question 4 - 500

- Hydroelectric dams while not a source of Green Gas contributing to Global Warming have this environmental impact.

Answer 4 – 500

- What is have caused declines in our Nation's fisheries by killing fish, disrupting their migration routes and ultimately limiting habitats? Or
- What is caused the flooding of once vast tracks of pristine forest in States like Washington and California?



Question 5 - 100

- Natural gas and coal are forms of this....

Answer 5 – 100

- What is fossil fuels or non-renewables?



Question 5 - 200

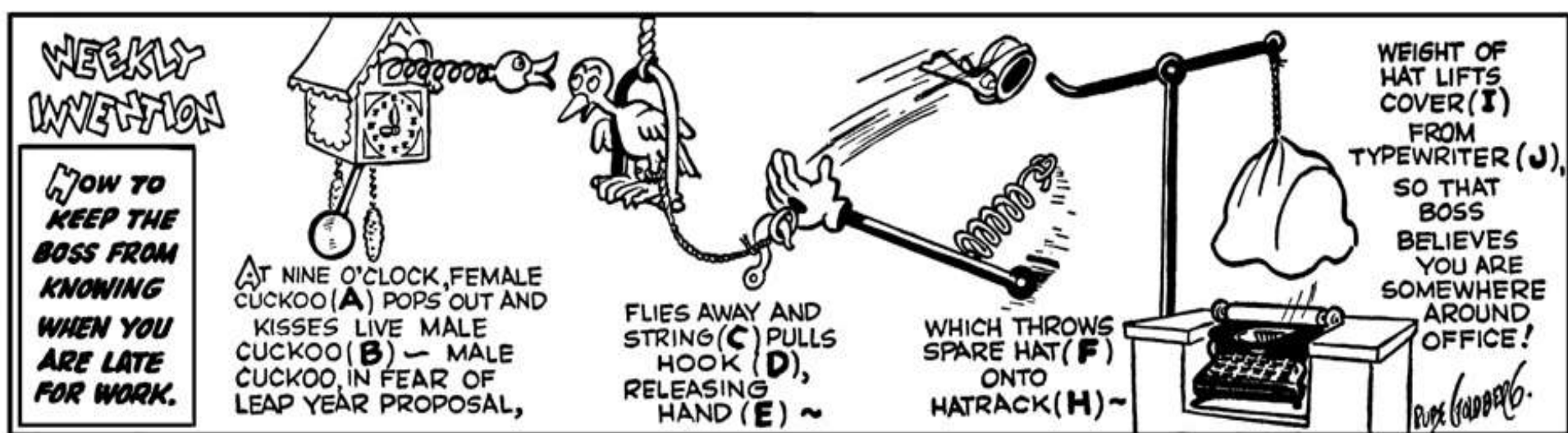
- This energy resource is estimated to be depleted by the year 2050.

Answer 5 – 200

- What is the fossil fuel petroleum. (oil)



Question 5 - 300



Accurately describe 3 energy transforms in a Rube Goldberg Machine.

A) Pops out & Kisses live male cuckoo

B) Male cuckoo in fear flies away

C) Pulls hook

Answer 5 – 300

- What's is
- A) Pops out & Kisses live male cuckoo
Elastic PE \rightarrow KE (mech) & sound
- B) Male cuckoo in fear flies away
Chem. PE \rightarrow KE (flight) or just *KE is fine*
- C) Pulls hook \rightarrow D) releasing hand spring \rightarrow E)
KE (mech.) \rightarrow Elastic PE \rightarrow KE (hat flying)

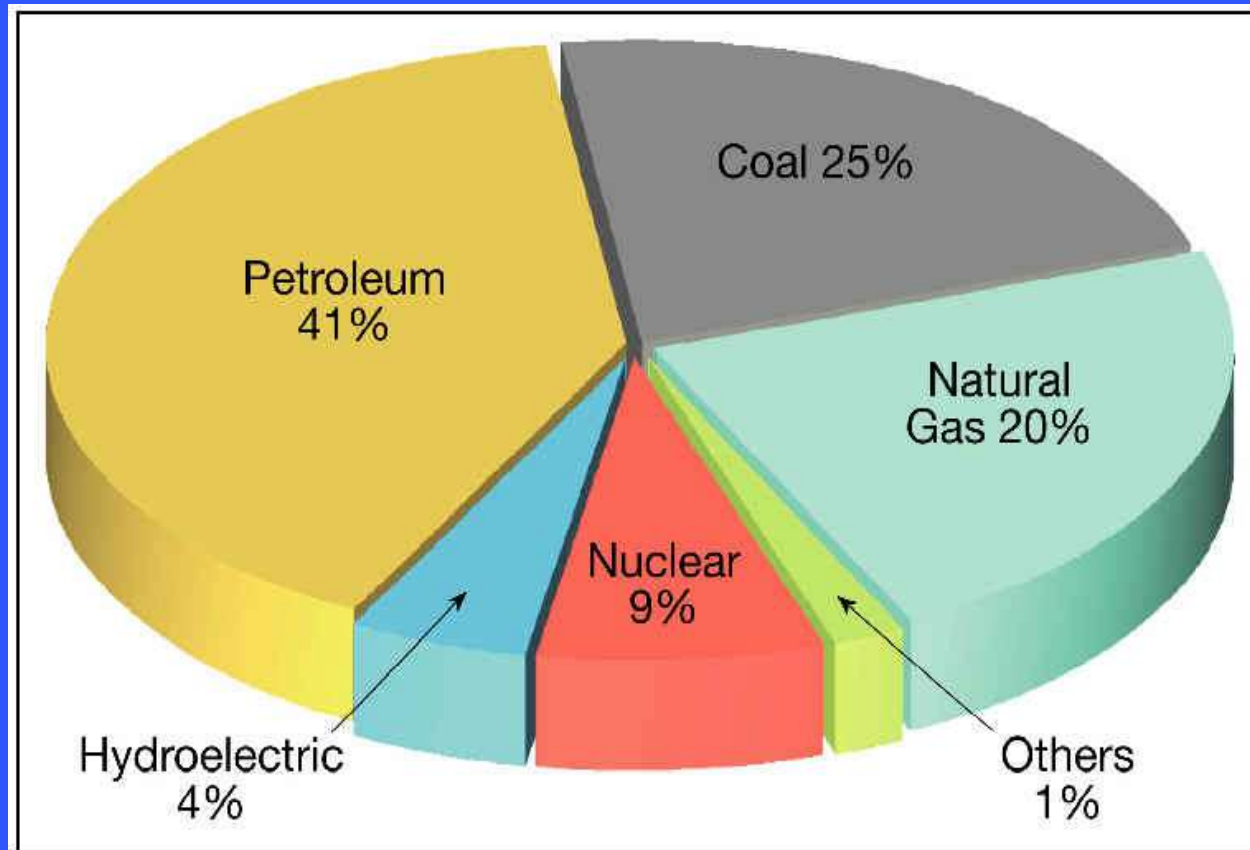


Question 5 - 400

- The American economy runs on almost entirely on this type of energy resource....

Answer 5 – 400

- What is the burning of fossil fuels?



Question 5 - 500

- Global Warming or Climatic Change is now supported by numerous creditable scientific sources to be caused largely in part due to humans doing this....

Answer 5 – 500

- What is the burning of fossil fuels?

