

Chapter 4 Name _____

1. What is the definition of energy?

2. Energy is mathematically expressed as the product of mass of the object and the velocity squared. Calculate the energy (in kJ) of a moving object whose mass is 350 kg and the velocity is 150 m/s (meter per second).

3. Define these different types of energy.

Kinetic Energy

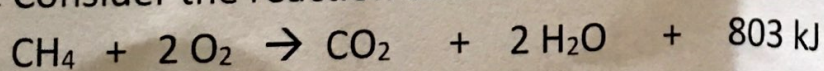
Potential Energy

Chemical Energy

Electrical Energy

Nuclear energy.

4. Consider the reaction below:



a. Is this reaction exothermic or endothermic?

b. Calculate the amount of energy that will be involved in this reaction starting with 50 g of methane (CH_4)

c. How much energy is involved when 6 moles of CO_2 are produced?

5. Define oxidation and reduction in terms of electrons only.

6. Write oxidized or reduced to the following processes. Also write the number of electrons lost or gained in the appropriate places.

