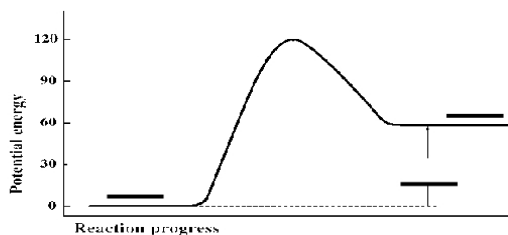


# Reaction Rate Worksheet 1

## PART A – REACTION ENERGY

1. Fill in the blanks on the reaction coordinate diagram with the appropriate letters. Not all letters will be used

- A. reactants
- B. products
- C. energy released
- D. energy absorbed



Specify whether each reaction is exothermic (EXO) or endothermic (ENDO).

- 2. \_\_\_\_\_ The reaction shown in the diagram to the right.
- 3. \_\_\_\_\_ The burning of wood to produce a hot flame.
- 4. \_\_\_\_\_  $4\text{Fe}(s) + 3\text{O}_2(g) \rightarrow 2\text{Fe}_2\text{O}_3(s) + \text{energy}$
- 5. \_\_\_\_\_ A test tube that feels cold to the touch after two substances have been mixed.

## PART B – REACTION RATES

6. Using the reaction coordinate diagram above, draw a new curve that shows how a catalyst would affect the reaction pathway.

Place a checkmark next to the actions that would most likely increase the reaction rate.

- 7. \_\_\_\_ Lowering the temperature of the reactants.
- 8. \_\_\_\_ Dissolving two solids in water before mixing them together.
- 9. \_\_\_\_ Diluting an aqueous solution of HCl with water before adding a piece of magnesium.
- 10. \_\_\_\_ Grinding a solid into fine particles.
- 11. \_\_\_\_ Adding an enzyme catalyst.