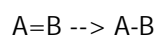


- 1 Based on the following average bond enthalpies, which is more stable, a ring of eight single bonded O's, or four double bonded O₂'s?
O-O: 142 kJ/mol; O=O: 498.7 kJ/mol
- A O₈
 - B 4 O₂
 - C More information needed
- 2 Based on the following average bond enthalpies, which is more stable, a ring of eight single bonded S's, or four double bonded S₂'s?
S-S: 268 kJ/mol; S=S: 352 kJ/mol
- A S₈
 - B 4 S₂
 - C More information needed
- 3 Why is the O=O bond more than three times more stable than two O-O bonds, whereas the S=S bond is only half again more stable than two S-S bonds?
- A O is more electronegative than S
 - B O is smaller than S
 - C S is a solid at room temperature whereas oxygen is a gas.
 - D None of the above
- 4 The enthalpy change in the hypothetical reaction
- $$A-A + 2 B \rightarrow 2 A-B$$
- must be ...
- A Positive (endothermic)
 - B Negative (exothermic)
 - C Unable to say without further information
- 5 The enthalpy change in the hypothetical reaction
- $$2 A-B \rightarrow A-A + B-B$$
- must be ...
- A Positive (endothermic)
 - B Negative (exothermic)
 - C Unable to say without further information

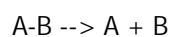
- 6 The enthalpy change in the hypothetical reaction



must be ...

- A Positive (endothermic)
- B Negative (exothermic)
- C Unable to say without further information

- 7 The enthalpy change in the hypothetical reaction



must be ...

- A Positive (endothermic)
- B Negative (exothermic)
- C Unable to say without further information