**Answers to Bond Energy Worksheet**

1. -184 kJ

2. -549 kJ

3. 0 kJ

4. -489 kJ

5. -808 kJ

6. 309 kJ

H2 (g)+ CO2(g)

2H + C + 2O

H2O(g) + CO(g)

Reaction Progress

E

N

T

H

A

L

P

Y

(kJ)

ΔH = 309 kJ

ΔH b.b = 2034 kJ

ΔH b.m = -1725 kJ

7. -1275 kJ

9. 1076 kJ

10. 2702 - 2826 = -124 kJ

H2 (g)+ C2H4(g)

6H + 2C

C2H6(g)

Reaction Progress

E

N

T

H

A

L

P

Y

(kJ)

ΔH = -124 kJ

ΔH b.b = 2702 kJ

ΔH b.m = -2826 kJ



11. 6291 kJ – 11948 kJ = -5657 kJ

12. 2378 kJ – 2690 kJ = -312 kJ

CH4 (g)+ 3Cl2(g)

4H + C + 6 Cl

CHCl3(g) + 3HCl(g)

Reaction Progress

E

N

T

H

A

L

P

Y

(kJ)

ΔH = --342 kJ

ΔH b.b = 2378 kJ

ΔH b.m = -2690 kJ

13. 2176 kJ – 2314 kJ = - 138 kJ