ANSWERS: Hess’s Law Internal

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| **Task Number** | **Element and Performance Criteria** | **Evidence**  (The answers or performance expected from the students) | **Judgement**  (A statement that defines the standard to be achieved) |
| A  1. ΔH = ΣΔfH(prod) - ΣΔfH(react)  = [-393 + 2(-297)] - [88 + 3 (0)]  = -1075 kJ  2. 3C + 3O2 3CO2 ΔH = 3 (-393)  4H2 + 2O2 4H2O ΔH = -4(285)  3CO2 + 4H2O C3H8 + 5O2 ΔH = -(-2217)  3C + 4H2 C3H8 ΔH = -102 kJ mol-1  3. S + O2 SO2 ΔH = -297  SO2 + 0.5O2 SO3 ΔH = -396  SO3 + H2O H2SO4 ΔH = x  S + 1.5O2 + H2O H2SO4 ΔH = -529  -297 - 396 + x = -529  x = +164 kJ | 1.1 |  | Two calculations correct.  Correct units must be included with answers. |

edited from an old internal “Enthalpy changes” Unit Standard 8948