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Chemistry 2.4 (2.1)

Worksheet 3

Name _____

Question One- Complete the table

Reaction	Exo / endo	ΔH + / -
Burning sulfur	Exothermic	-
Water boiling		
Photosynthesis		
Respiration		
Bond breaking		
Bond making		

Question Two

Burning sulfur is an exothermic reaction with an activation energy barrier of 40 kJ

$$S_8 + 8 O_2 \rightarrow 8 SO_2$$
 $\Delta H = -2380 \text{ kJmol}^{-1}$

Draw a fully labelled energy profile of the reaction

Calculate the amount of energy released when 1.60 g of sulfur is burnt

What is the mass of sulfur is needed to release 3400 kJ of energy?