Chemistry 2.4 (2.1) **Worksheet 1** Name _____

Question One

Sulfur (S_8) is used in gun powder. It reacts with oxygen in an exothermic reaction.

$$S_8 + 8O_2 \rightarrow 8SO_2$$

a) 11872 J is released when 1.28 g of sulfur (S_8) is being burnt. Calculate the enthaphy (in $kJmol^{-1}$) of the combustion reaction above.

b) Using the answers above, calculate how much energy released when:

a. 15 g of sulfur is burnt

b. 250 g of sulfur dioxide formed

Question Two

Complete the table below. The first row is the example

$$2SO_2 + O_2 \rightarrow 2SO_3 \qquad \Delta H = -1456\ kJmol^{-1}$$

Amount of SO_2	Mass of SO_2	Amount of O_2	Mass of O_2	Amount of SO_3	Mass of SO_3	Amount of equation	Energy released
2	128.2 g	1	32.0 g	2	160.2 g	1	1456 kJ
	5.62						
			63.7				
							3.21 kJ