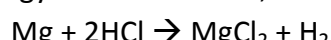


Question One- Complete the table below

Change in energy	Amount (mol)	Enthalpy (kJmol ⁻¹)
5672 kJ released	0.21	
	3.25	-34.2 kJmol ⁻¹
1378 J absorbed		793 kJmol ⁻¹
13.7 kJ absorbed	1.75	
	0.0257	-1357 kJmol ⁻¹
678.2 kJ released		-258.5 kJmol ⁻¹

Question Two

- 1) Julie-Ann added 5 g of magnesium to excess amount of hydrochloric acid. The reaction released 560 J of heat energy. Assuming all energy released is heat, what is the enthalpy of this reaction?



- 2) Peter did the same reaction with 15 g of magnesium. Calculate the amount of heat energy released.
- 3) Aroha (Mr Yung's imaginary Maori friend) then did the pop test with all of the hydrogen gas in the experiments above collected. This reaction has an enthalpy of -5600 kJmol⁻¹. Calculate how much energy was released.