1. Here are the first ionization energies for the second row in the periodic table (in kJ/mol)

Li	Be	B	C	N	O	F	Ne
520	899	801	1086	1402	1314	1681	2081

   a. Explain **in your own words** why the ionization energy increases **in general** as you go from left to right across the periodic table.

   b. Why is the ionization energy of boron (B) lower than that of beryllium (Be)?

2. Here are the first through eighth ionization energies for an element in the third row of the periodic table (in kJ/mol). Which element is it? Explain your answer.

1^{st}	2^{nd}	3^{rd}	4^{th}	5^{th}	6^{th}	7^{th}	8^{th}
786	1577	3231	4355	16091	19805	23780	29287

3. Why are ionization energies evidence for the quantization of energy levels in atoms, as described by the Schrodinger wave mechanical model of the atom?