Boyles Law – PhET SIM

Open the following SIM:

https://phet.colorado.edu/en/simulation/legacy/gas-properties

You are going to investigate how the temperature affects the pressure for a fixed volume of gas.

1) Keep volume constant. Pump in some gas particles into the container. Wait for the pressure to stabilise.
2) In the table below, record the temperature and pressure. Now vary the temperature by heating and cooling. In each case wait for the system to stabilise and record the temperature and pressure.

Temperature (K)	Pressure (Atm)

3) Collect data for 6 different temperatures.
4) On Excel plot pressure against temperature (with temperature on the x axis). Add a trendline, and add the equation of the line to your graph.
5) Describe how temperature affects pressure.

6) In terms of particles (the kinetic model) why does this happen?

7) What is significant about the temperature where the pressure is zero.

8) How do you convert kelvin to degrees celcius?