**Unit 1 practice questions**

1. State the SI units for:
	1. Time
	2. Length
	3. Temperature
	4. Light intensity
2. What is the precision of the following instruments:
3. Which type of error could be present when:
	1. Digital thermometer
	2. Describing the colour of a solution
	3. Reading the volume on a measuring cylinder
4. Order the following in increasing size:
	1. 1 m 200 cm 100 mm 0.01 km
5. Name the piece of equipment commonly used when working with the vacuum line.
6. How many decimal places (DPs) are in these numbers:
	1. 10
	2. 27.880
	3. 7000000.7
	4. 6.30 x 10-2
7. How many significant figures (SFs) are in these numbers:
	1. 250
	2. 9
	3. 45000.02
	4. 4.0010
	5. 300450
	6. 8.12 x 107
8. Convert the following into scientific notation or into a normal number:
	1. 4.933 x 103
	2. 5.0 x 10-2
	3. 9.0111 x 107
	4. 981
	5. 0.0071
	6. 2005600060
9. Calculate the following by taking into account the number of DP sor SFs (assume all numbers are data from the lab):
	1. 42.0 x 77.822 =
	2. $\frac{73.29+6.02+8}{2.874}$=
	3. The average of 4.39, 3.98, 4.0, 4.122.
	4. $\frac{5.220+(90×301)}{(\frac{73.1}{5.821})×8.522}×(\frac{2.00}{2})$
10. How do we reduce the effect of random errors in experiments?
11. Convert the following:
	1. -12 ºC 🡪 K
	2. 298 K 🡪 ºC
	3. 3400 cm3 🡪 dm3
	4. 68 dm3 🡪 cm3
	5. 1520 mmHg 🡪 atm
	6. 3 atm 🡪 mmHg
	7. 16 g oxygen gas 🡪 moles of oxygen gas
	8. 0.01 moles C 🡪 mass of C