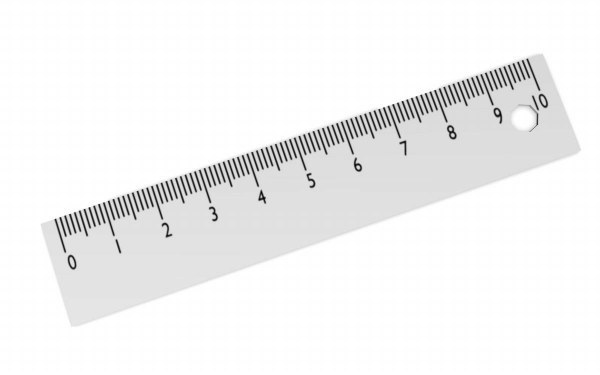
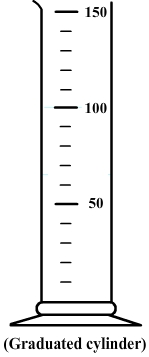
**Unit 1 practice questions**

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. =
   3. The average of 4.39, 3.98, 4.0, 4.122.
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