Significant figures

The numbers whose values are accurately known in a particular measurement are called as its significant figures.

Rules for determining the number of significant figures

1. All non- zero are significant
   Example: 5432 – 4 significant figures
2. All zeroes occurring between two non- zero digits are significant.
   Example: 502 – 3 significant figures
3. If a number is less than one, the zero(s) on the right of decimal point are not significant
   Example: 0.00574 – 3 significant figures
4. In a number without a decimal point, the trailing zeros are not significant.
   Example: 5210 – 3 significant figures
5. In a number without a decimal point, the trailing zeros are not significant but if they come from a measurement then they are significant. (i.e. a unit is there)
   Example: 5210 m – 4 significant figures
6. In a number with decimal point, the trailing zeros are significant.
   Example: 0.06700 – 4 significant figures
7. All zeros to the right of a decimal point are significant, if they are not followed by a non-zero digit.
8. Example: 67.000 – 5 significant figures
9. Change of units does not change the number of significant figures in a measurement.
   Example: 2.6km - 2 significant figures
   2600m –2 significant figures
   260000cm - 2 significant figures

- Write the number of significant figures in the following:

(i) 6729
(ii) 0.024
(iii) 4.57×10^8
(iv) 4200
(v) 91.000