1. Any digit that is non zero is significant
For example, 275 kg has three significant figures.

2. Zero's between nonzero digits are significant.
For example, 50521 km contains five significant figures.

3. Zero's to the left of the first nonzero digit are not significant as they are indicative of the decimal point only.
For example, 0.003g contains one significant figure.

4. For numbers greater than one, all zeroes to the right of the decimal point are significant.
For example, 5.00 kg and 2.30 mg have three significant figures.

5. If a number is less than 1, then the zeroes at the end of the number and the zeroes in between nonzero digits are significant.
For example, 0.50090 mL has five significant figures.

6. For numbers that do not contain decimal points, zero's after the last nonzero digit may or may not be significant. By using scientific notations, we can rectify this.
For example, 100 written as 1×10^2 contain one significant figure, written as 1.0×10^2 contains two significant figures and as 1.00×10^2 contains three significant figures, depending on the situation.

CALCULATION USING SIGNIFICANT FIGURES
When there are too many significant figures, we need to round them off. This is set by the value with the least certain significant figures in the calculation. In other words, the least significant figure decides the number of significant figures in the final answer based on rules below:

Addition and Subtraction
Rule
In addition or subtraction, round off the answer to the value with the least number of decimal points.
Example 1.1.1
23.3 cm^3 + 6.052 cm^3 + 139.4 cm^3 = 168.8 cm^3 (**+0.1).**

Multiplication and Division
Multiplying the two numbers (23.2) (0.1257) gives 2.91624. Here again, this is not the correct answer because of the difference in the uncertainty of the numbers.

Rule
In multiplication and division, perform the multiplication or division and then round off the answer to the same number of significant figures as the number with the fewest significant figures.

For the preceding problem, the answer should have three significant figures:

(23.2)   x   (0.1257) =   [2.91624] = 2.92

Exact Numbers
An exact number does not limit the number of significant figures in the result of a calculation. For example, if an experiment is to be performed exactly six times and 6.35 g of a substance is needed each time, the total amount needed is 38.1g.

(6) (6.35 g)   =   38.1 g   need not be rounded to one significant figure

Mixed calculations
Addition, subtraction, multiplication, and division can be combined in many ways; each calculation must be examined individually to determine which step limits the significant figures.

FINAL RULE:

Carry your calculator value till you round off at the last step to avoid cumulative error in final answer.