1**. Finite precision** is computer use a finite number of bits(0’ s and 1;s) to represent numbers.

 2. There are many types of errors . I have tried to mention some below

 - Truncation /Discretization of error

 - Approximation error

 - Relative error and

 - Absolute error

3. Absolute error and relative errors can be taken under the measurement error .

 1. **Absolute error** is magnitude of the difference between the true value x and the approximate value Xa

 The error between two values is defined as

 Eabs = ||X-Xa||

 Where X denotes the exact values and Xa denotes the approximation

2. **Relative error** is defined as the ratio of absolute to the size of X

 Erel= ||X-Xa||/||X||

 4. **Modeling** is the art of describing in symbolic language of a real life System so that approximately correct prediction can be made regarding the behavior or evolution of the system under varied circumstances of interest. Mathematics is the language of engineering.

 5. **Accuracy** :- refers to how closely a value agree with true value.

 **Precision** :- refers to how closely a values agree with each other.

 6. To convert first we need to separate the intiger and the fraction number in two parts

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 35 | 2 |  |  |  |  |  |
| -34 | 17 | 2 |  |  |  |  |
| 1 | -16 | 8 | 2 |  |  |  |
|  | 1 | -8 | 4 | 2 |  |  |
|  |  | 0 | -4 | 2 | 2 |  |
|  |  |  | 0 | -2 | 1 |  |
|  |  |  |  | 0 |  |  |
| Translation of numbers from one system to another |  |

Result of integer part :3510 = 1000112

The fractional part of number is found by multiplying on the basis new

|  |
| --- |
| Translation of numbers from one system to another |
| **0** | .625 |
| **.** | 2 |
| **1** | 25 |
|  | 2 |
| **0** | 5 |
|  | 2 |
| **1** | 0 |
|  |  |

Result of fraction part :0.62510 = 0.1012

Then add the intiger and fractional part here :-

1000112 + 0.1012 = 100011.1012

The final result will be :-
35.62510 = 100011.1012