

3/11/21

Number Systems 1

Part A.

1 $365_{10} \rightarrow \text{Base } 2$

$$\begin{array}{ccc}
 3 & 6 & 5 \\
 \downarrow & \downarrow & \\
 011 & 111 & 101 \\
 \downarrow & & \\
 01111101
 \end{array}$$

| Binary | |
|--------|---|
| 000 | 0 |
| 001 | 1 |
| 010 | 2 |
| 011 | 3 |
| 100 | 4 |
| 101 | 5 |
| 111 | 6 |

or

| 2^8 | Value | Count | RT | REM | Binary |
|-------|-------|-------|-----|-----|--------|
| 2^8 | 256 | 1 | 256 | 109 | |
| 2^7 | 128 | 1 | | 237 | |
| 2^6 | 64 | 1 | | 301 | |
| 2^5 | 32 | 1 | | 333 | |
| 2^4 | 16 | 1 | | 349 | |
| 2^3 | 8 | 1 | | 357 | |
| 2^2 | 4 | 0 | | 361 | |
| 2^1 | 2 | | | 363 | |
| 2^0 | 1 | | | 364 | |