Converting Decimal Numbers to Binary Numbers

Repeated process:

1. Divide by two and write the remainder.
2. Continue this process until you get a division answer of zero and a remainder of 1.
3. Read the binary from bottom-up.
4. Verify that you have 8, 16, 24, or 32 digits. (memory will be allocated in 8-bit sets)

Example: Change 220 to binary

2)220	
110	0
55	0
27	1
13	1
6	1
3	0
1	1
0	1

220 decimal is
11011100 as binary
(this is 8 bits … all good)

Change 357 to binary

2) 357	
178	1
89	0
44	1
22	0
11	0
5	1
2	1
1	0
0	1

357 decimal is 101100101
but this is 9 digits, we need to step it up to 16-bits so,
00000001 01100101 is correct

Try these and verify that you can get the right answer …

198 → 11000110

295 → 00000001 00100111

87 → 01010111