Converting Decimal Numbers to Octal Numbers

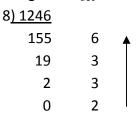
Repeated process:

- 1. Divide by 8 and write the remainder.
- 2. Continue this process until you get a division answer of zero and a remainder that is between 0 and 7.
- 3. Read the Octal from bottom-up. (base 8 ... 8 different representations)

Example:

220 decimal is 334 as Octal

Change 1246_{dec} to Octal



1246 decimal is 2336 as Octal

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

$$198_{dec} \rightarrow 306_{oct}$$

$$2958_{dec} \rightarrow 5616_{oct}$$

$$87_{\text{dec}} \rightarrow 127_{\text{oct}}$$

Converting Decimal Numbers to Hexadecimal Numbers

Repeated process:

- 1. Divide by 16 and write the remainder.
- 2. Continue this process until you get a division answer of zero and a remainder that is between 0 and 15.
- 3. Read the Hexadecimal from bottom-up.
- 4. Remember: 0 9, A=10, B=11, C=12, D=13, E=14, F=15 (this is base 16 ... 16 different representations)

Example:

Change 220_{dec} to Hexadecimal

220 decimal is DC as hexadecimal

Change 1246_{dec} to Hexadecimal

1246 decimal is 4DE as hexadecimal

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

$$198_{dec} \rightarrow C6_{hex}$$

$$2958_{dec} \rightarrow B8E_{hex}$$

$$87_{dec} \rightarrow 57_{hex}$$