To convert binary numbers to decimal numbers

1. Multiply each digit in the binary number by its binary place value.
2. Add all of the results from #1 together.

To convert decimal numbers to binary numbers

1. Find the largest binary place value that is less than or equal to the decimal number.
2. Put a 1 in the binary place found in #1.
3. Subtract the decimal value of the binary digit just placed from the starting decimal number.
4. Repeat #1-3 using the result from #3.
5. When the result from #3 is zero, finish the number by filling in any empty binary places with zeros.

To convert hexadecimal numbers to decimal numbers

1. Multiply the decimal value of each hexadecimal digit by the hexadecimal place value of that digit.
2. Add all of the results from #1 together.

To convert decimal numbers to hexadecimal numbers

1. Find the largest hexadecimal place value that is less than or equal to the decimal number.
2. Determine how many whole times that place value can divide the decimal number.
3. Place hexadecimal equivalent of the result from #2 in the hexadecimal place found in #1.
4. Subtract the decimal value of the hexadecimal digit just placed from the starting decimal number.
5. Repeat #1-4 using the result from #4.
6. When the result from #4 is zero, finish the number by filling in any empty hexadecimal places with zeros.

To convert binary numbers to decimal numbers

1. Multiply each digit in the binary number by its binary place value.
2. Add all of the results from #1 together.

To convert decimal numbers to binary numbers

1. Find the largest binary place value that is less than or equal to the decimal number.
2. Put a 1 in the binary place found in #1.
3. Subtract the decimal value of the binary digit just placed from the starting decimal number.
4. Repeat #1-3 using the result from #3.
5. When the result from #3 is zero, finish the number by filling in any empty binary places with zeros.

To convert hexadecimal numbers to decimal numbers

1. Multiply the decimal value of each hexadecimal digit by the hexadecimal place value of that digit.
2. Add all of the results from #1 together.

To convert decimal numbers to hexadecimal numbers

1. Find the largest hexadecimal place value that is less than or equal to the decimal number.
2. Determine how many whole times that place value can divide the decimal number.
3. Place hexadecimal equivalent of the result from #2 in the hexadecimal place found in #1.
4. Subtract the decimal value of the hexadecimal digit just placed from the starting decimal number.
5. Repeat #1-4 using the result from #4.
6. When the result from #4 is zero, finish the number by filling in any empty hexadecimal places with zeros.