

## Number Systems

Exercises:

- Convert each of the binary values below to decimal. (Note the base 2 is left out)  
a) 11010            b) 10001            c) 11111            d) 100010
- Convert each of the decimal values below to binary.  
a) 44                b) 75                c) 135                d) 111
- Convert each binary value below to decimal. Can you find a shortcut?  
a) 1111            b) 11111            c) 111111            d) 11111111
- Convert each of the following to binary. What is the pattern?  
a) 6                b) 12                c) 24                d) 48
- The maximum size of a 2 byte integer is 32768, while it can only be as small as negative 32767. Explain by considering how many numbers this range represents.
- In defining a colour in html, the component colours are given as a value from 0 to 255 for each of Red/Green/Blue. How many bytes of data does this take per pixel?