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## **DOTTED DECIMAL NOTATION (Worksheet #1)**

You've learned that devices connected to a LAN use binary numbers to communicate, but you and I have trouble using those numbers. We need a numbering system a little more common and easier to recognize. A router may see a binary number but a human recognizes this as dotted decimal notation.

You'll remember that we began by converting numbers to groups of 4 octets (or bytes), and that each octet equates to a real number. A router sees 11001010 (128+64+8+2) but we see 202.

An entire IP address might look like this:

11000111.00100000.00001111.00000111  
202 . 32 . 15 . 7

Try to convert these binary numbers to dotted decimal notation:

10000110 = **134**

00101011 = **43**

01111010 = **122**

11001100 = **204**

11110100 = **244**

11111101 = **253**

10111011 = **187**

11000111 = **199**

00010100 = **20**

Convert these decimal numbers to binary:

235 = **11101011**

163 = **10100011**

193 = **11000001**

63 = **00111111**

Convert these IP addresses in binary form to dotted decimal notation:

10111000101010000111101001100111

**184.168.122.103**

00110111110111010111001111101111

**55.221.115.239**