

Numbering System Conversions

Show Work! Point deductions taken if work not shown

1. Convert
- 19_{10}
- to binary

$$\boxed{10011_2}$$

$$\begin{array}{r} 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \\ 1 \quad 0 \quad 0 \quad 1 \quad 1 \end{array}$$

2. Convert
- 158_{10}
- to binary

$$\boxed{1001110_2}$$

$$\begin{array}{r} 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \quad \quad \quad \quad | \\ 1 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \end{array}$$

3. Convert
- 121_{10}
- to binary

$$\boxed{1111001_2}$$

$$\begin{array}{r} 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \quad \quad \quad \quad | \\ 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1 \end{array}$$

4. Convert
- 31_{10}
- to binary

$$\boxed{1111_2}$$

$$\begin{array}{r} 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \\ 1 \quad 1 \quad 1 \quad 1 \quad 1 \end{array}$$

5. Convert
- 69_{10}
- to binary

$$\boxed{1000101_2}$$

$$\begin{array}{r} 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \quad \quad \quad \quad | \\ 1 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0 \quad 1 \end{array}$$

6. Convert
- 164_{10}
- to binary

$$\boxed{10100100_2}$$

$$\begin{array}{r} 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ | \quad \quad \quad \quad \quad | \quad \quad \quad \quad | \\ 1 \quad 0 \quad 1 \quad 0 \quad 0 \quad 1 \quad 0 \quad 0 \end{array}$$