

Number systems

DEMO CONTENT - not an official curriculum or exam paper

Remember the bases

Binary: base 2, digits 0 and 1.

Octal: base 8, digits 0 to 7.

Decimal: base 10, digits 0 to 9.

Hexadecimal: base 16, digits 0 to 9 and A to F.

Worked example

Convert binary 1011 to decimal.

$$1 \times 8 + 0 \times 4 + 1 \times 2 + 1 \times 1 = 11$$

Your turn

1. Convert binary 1010 to decimal.
2. Convert decimal 5 to binary.
3. What is the decimal value of hexadecimal A?
4. Can the digit 8 appear in an octal number?

Answer key

1. 10 2. 101 3. 10 4. No; octal uses digits 0 to 7.