AQA Computer Science GCSE
3.3.4 Binary Arithmetic

Flashcards

What is binary arithmetic?

What is binary arithmetic?

Performing mathematical operations using binary numbers (0s and 1s).

How many binary numbers can you be asked to add together in an exam?

How many binary numbers can you be asked to add together in an exam?

Up to three.

What is the result of 0 + 0 in binary?

What is the result of 0 + 0 in binary?

0

What is the result of 1 + 0 in binary?

What is the result of 0 + 0 in binary?

1 with a carry of 0

What is the result of 1 + 1 in binary?

What is the result of 1 + 1 in binary?

0 with a carry of 1

What is the result of 1 + 1 + 1 in binary?

What is the result of 1 + 1 + 1 in binary?

1 with a carry of 1

What is a binary shift?

What is a binary shift?

Moving the bits of a binary number left or right.

What does a left binary shift do?

What does a left binary shift do?

Multiplies the number by 2 for each place shifted.

Which side are 0s added to in a left binary shift?

Which side are 0s added to in a left binary shift?

To the right.

What does a right binary shift do?

What does a right binary shift do?

Divides the number by 2 for each place shifted.

Which side are 0s added to in a right binary shift?

Which side are 0s added to in a right binary shift?

To the left.

Shift 00101100 left by 1.
What is the result?

Shift 00101100 left by 1. What is the result?

01011000 (44 → 88)

Why are binary shifts useful?

Why are binary shifts useful?

They are used to multiply or divide by powers of 2, and in graphics, compression, and encryption.