

Brainscape



- Go to the flashcards page on **bpcompisci.com**
- Log in to Brainscape with your college Google account

Brainscape



- The flashcards have been split into sets to match when we teach the content
- We would recommend starting with only 1 set enabled
- When we have finished enough content to unlock a new set, we will have a short test on the content from the set just finished. 30 marks, 30 minutes.
- The first Brainscape test is in the week beginning 10th November

Starter

1. Convert -45.5 into two's complement binary. Write your answer using one byte, with one bit after the binary point
 -
2. Convert $6\frac{11}{16}$ into two's complement binary. Write your answer using one byte, with 4 bits after the binary point
 -

Starter

1. Convert -45.5 into two's complement binary. Write your answer using one byte, with one bit after the binary point
 - 1010010.1
2. Convert $6\frac{11}{16}$ into two's complement binary. Write your answer using one byte, with 4 bits after the binary point
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Starter

1. Convert -45.5 into two's complement binary. Write your answer using one byte, with one bit after the binary point
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 - 0110.1011

Binary Multiplication

4.5.4.2 Unsigned binary arithmetic

Content	Additional information
Be able to: • add two unsigned binary integers • multiply two unsigned binary integers.	

Basics of binary multiplication

$$0 \times 0 =$$

$$0 \times 1 =$$

$$1 \times 0 =$$

$$1 \times 1 =$$

Basics of binary multiplication

$$0 \times 0 = 0$$

$$0 \times 1 =$$

$$1 \times 0 =$$

$$1 \times 1 =$$

Basics of binary multiplication

$$0 \times 0 = 0$$

$$0 \times 1 = 0$$

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Basics of binary multiplication

$$0 \times 0 = 0$$

$$0 \times 1 = 0$$

$$1 \times 0 = 0$$

$$1 \times 1 = 1$$

Reminder of decimal column method

$$\begin{array}{r} 13 \\ \times 11 \\ \hline \end{array}$$

Binary column method

$$\begin{array}{r} 1001 \\ \times 1011 \\ \hline \end{array}$$

Binary column method

$$\begin{array}{r} 1001 \\ \times 1011 \\ \hline \end{array}$$

Note: Binary multiplication is just a sequence of shifts and adds of the first operand

Practice



$$1101 \times 11$$

Practice



$$1101 \times 11$$

100111

Practice



$$10101 \times 101$$

Practice



$$10101 \times 101$$

1101001

Practice



$$11101 \times 10111$$

Practice



$$11101 \times 10111$$

1010011011

Procedures with Parameters

```
PROCEDURE Potato(quantity)
    PRINT quantity & " potato"
END PROCEDURE
```

```
PROCEDURE Main
    Potato(1)
    Potato(2)
    Potato(3)
    PRINT "4"
END PROCEDURE
```

Writing procedures with parameters

```
static void AskForAge(string name)
{
    Console.WriteLine("How old are you, " + name + "?");
    int age = int.Parse(Console.ReadLine());
}
```

Label:

- Procedure identifier
- Parameter
- Local variable
- Statement

PRIMM

- Predict
- Run
- Investigate
- Modify
- Make

Subroutines with Parameters PRIMM

This worksheet is on Google Classroom.