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FREE home ed maths lessons for exams

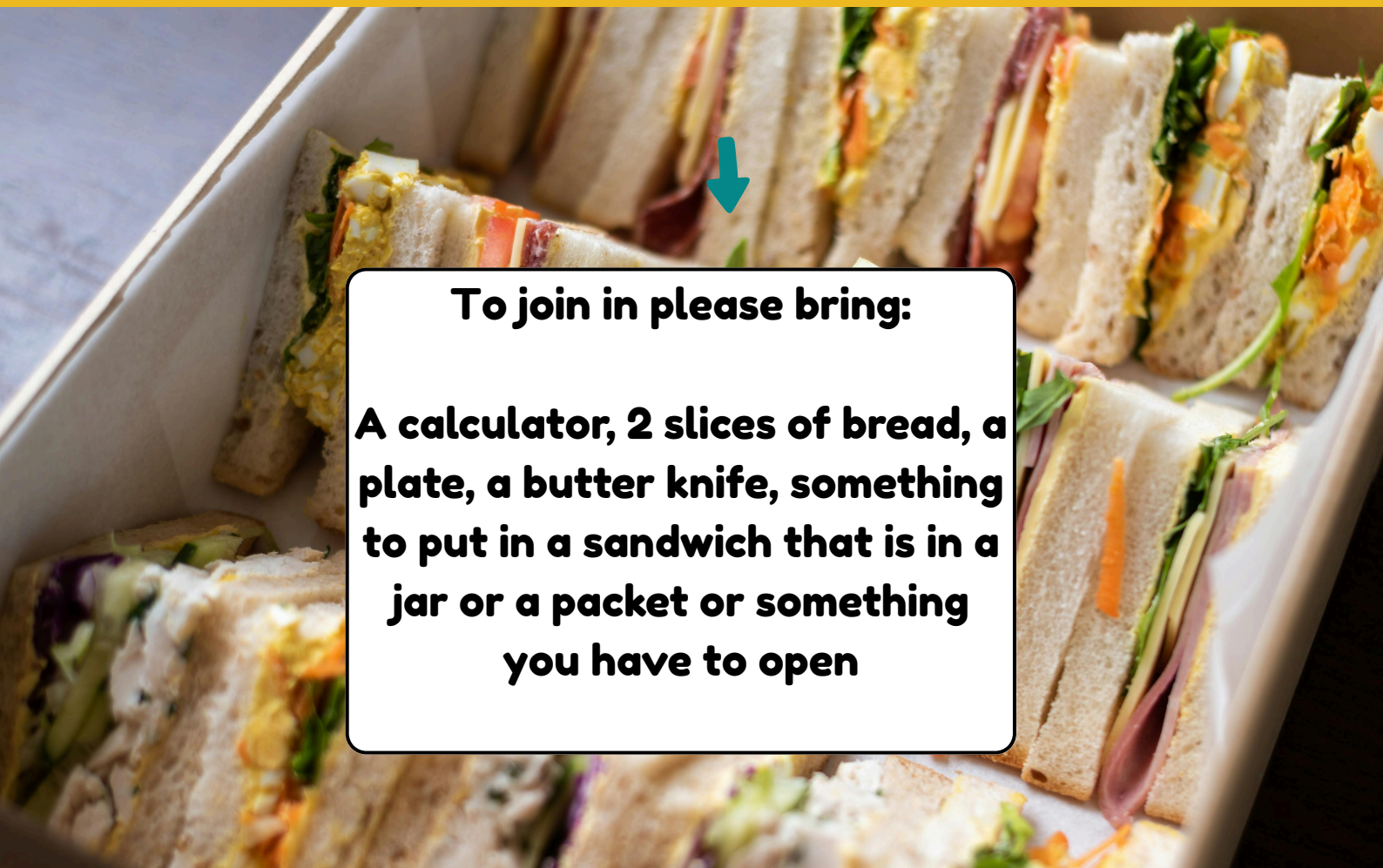
Functional Skills and GCSE Foundation

Edexcel

Unit 1: Number

Lesson 8 - Order of operations

FS1 ✓
FS2 ✓
GCSE ✓
iGCSE ✓

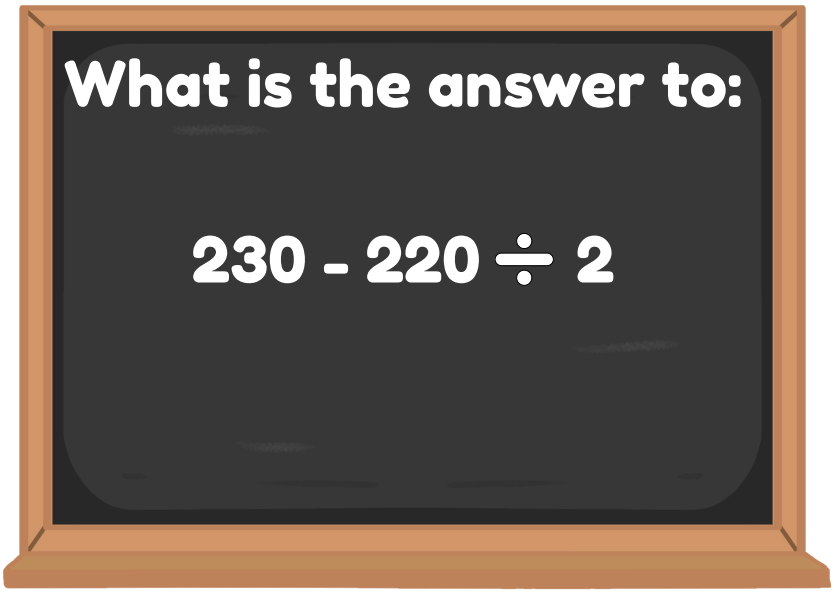


To join in please bring:

A calculator, 2 slices of bread, a plate, a butter knife, something to put in a sandwich that is in a jar or a packet or something you have to open

FS1 ✓
FS2 ✓
GCSE ✓
iGCSE ✓

Start thinking:



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Order of operations

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Order of operations

What about multiplication?

- 3 + 4 x 5

- 4 x 5 + 3

- (3 + 4) x 5

- 4 x (5 + 3)

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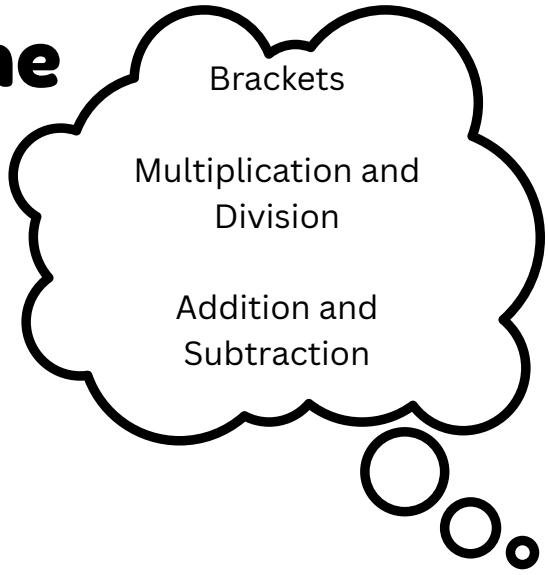
FS1
FS2
GCSE
iGCSE

Let's try some



$10 + 2 \times 2$

$100 - 40 \times 2$

$60 \div (1+5)$

$21 - 9 \div 3$

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Recap

What is 7^2

What is $\sqrt{49}$

Indices

$(2+5)^2$

$50 - 2^2 \times 4$

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FS2 ☑
GCSE ☑
iGCSE ☑

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Order of operations

Brackets ( )

Indices $\sqrt{\ }$ x^2

Multiplication and Division $\times$ $\div$

Addition and Subtraction $+$ $-$

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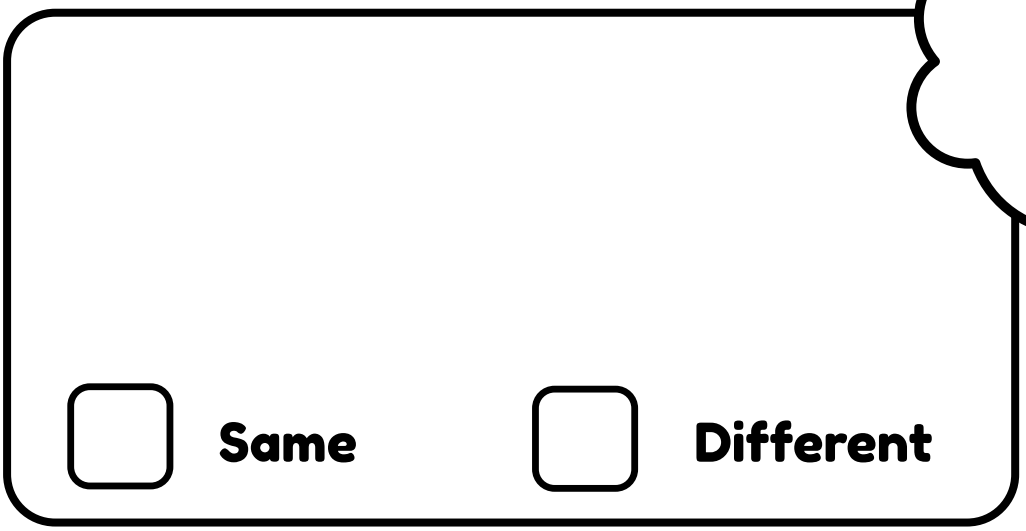
FS1 ☐
FS2 ☑
GCSE ☑
iGCSE ☑

Same or different?

Brackets
Indices
Division and
Multiplication
Addition and
Subtraction



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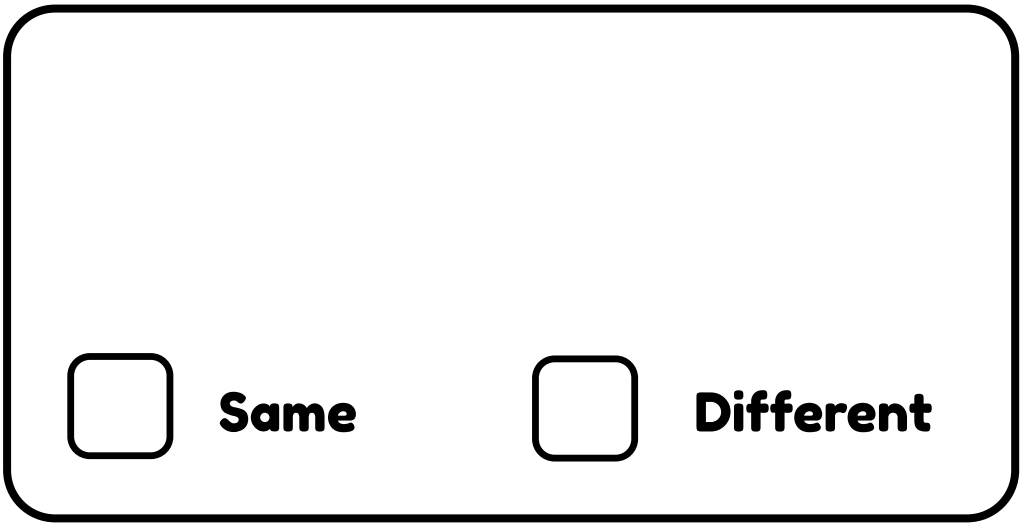

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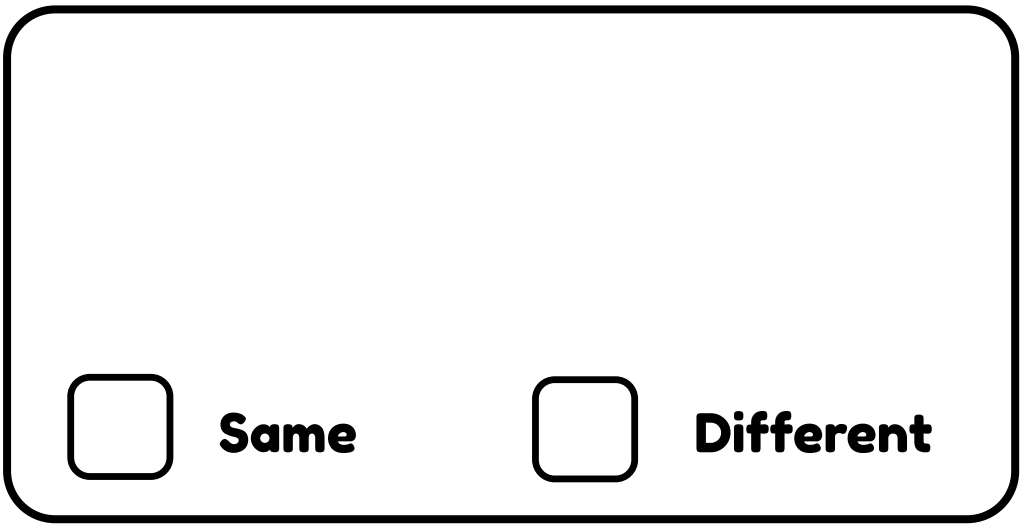

☐ Same ☐ Different

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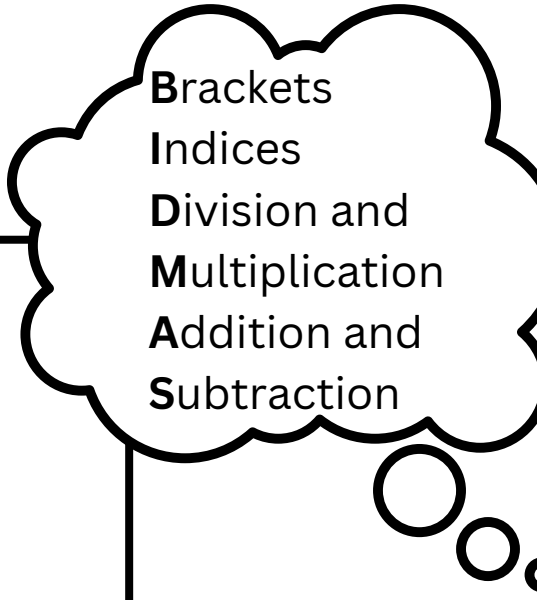
Same or different?



☐ Same ☐ Different

☐ Same ☐ Different

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FS1 ✓
FS2 ✓
GCSE ✓
iGCSE ✓

At home:

I only have time to do 3 questions

1. **Work out:**

16 - 5 x 2

(16 - 5) x 2

Why are the answers different?

2. Work out:

$9 \times 2 + 20 \div 2^2$

$9 \times 2 + (20 \div 2)^2$

Why are the answers different?

3. Add in brackets to make these true

10 x 3 + 5 = 80

10 + 10 ÷ 10 = 2

$9 + 4^2 - 3 \times 5 = 10$

Problem solving

At home:

Using 4, 4's and the operations +, -, x , ÷ , brackets and indices, make all the numbers 1 - 20

Example: 4 x 4 - (4 + 4) = 8
This is just one of the calculations I could do to get 8, there will be multiple ways to do it for every number

1 =

2 =

3 =

4 =

5 =

6 =

7 =

8 =

Problem solving

At home:

9 =

10 =

11 =

12 =

13 =

14 =

15 =

16 =

17 =

18 =

19 =

20 =

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Practice questions

At home:

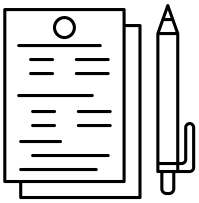
**** For Functional Skills 1 you do not have to be able to use indices so feel free to just practice what you need to from these ****

You can find some practice at different levels online in Transum here

And a game you could play here

Corbett maths has some great practice questions here - I would head straight to the Apply section for something a bit more interesting, but do feel free to use the rest if you want to do lots of practice

Remember that 5 questions thought about really deeply is waaaaaay better than 30 questions whizzed though.



Exam questions

At home:

FFS 1 and 2 and GCSE and iGCSE:
Here are a set of real past exam questions taken from the GCSE by Kenneth Stafford
Answers here

And if you want more exam style questions, you can get them at Maths Genie here
Answers here