Four Operations (Part 1)
BODMAS

When completing calculations with multiple operations, there is a rule to follow to help you complete the calculation. That rule is BODMAS.

B	Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$
O	Order	$5 + 2^2 = 5 + 4 = 9$
D	Division	$10 + 6 \div 2 = 10 + 3 = 13$
M	Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$
A	Addition	$10 \times 4 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 2$

BODMAS is a useful acronym that lets you know which order to solve mathematical problems. Start with anything inside the **brackets**, going from left to right. Then complete anything involving a power or a square root next (such as 3^2), again working from left to right. These are known as **orders**. After *brackets* and *order*, complete **division** and **multiplication**. As multiplication and division are ranked equally, you go from left to right in the calculation, completing each operation as it appears. Finally, complete any **addition** or **subtraction**. Again, as they rank equally, you go from left to right, completing them in the order that they appear.

Activity 1 – Use the rules of BODMAS to solve these calculations:

1. $75 - 5 \times 5 =$

2. $6 + 6 \times 6 =$

3. $9 \times 9 + 9 =$

4. $45 \div (3 + 2) =$

5. $17 \times 2 - 9 \div 3 =$

6. $(9 \times 3) \div (5 + 4) =$

7. $(4 + 7) \times 3 =$

8. $7 + 63 \div 9 =$

9. $63 \div (26 - 16) =$

10. $81 - 24 \div 6 + 3 =$

Activity 2 – Compare these two calculations:

$$31 + 9 \times 7 \text{ and } (31 + 9) \times 7$$

Explain what is the same and what is different:

_____

_____

_____

_____

Activity 3 – Insert operations into the empty boxes to make these number sentences true.

6 □ 3 □ 7 = 16

6 □ 3 □ 7 = 25

6 □ 3 □ 7 = 9

Activity 4 – Insert brackets in these number sentences so that these number sentences are true.

$$12 - 2 \times 5 = 50$$

$$12 - 8 - 5 = 9$$

$$10 \times 8 - 3 \times 5 = 250$$

Challenge – Write two number sentences using the digits 2, 3, 5 and 8 before the equals sign. Each answer must be the same but the number sentences must be different.

Addition and subtraction multi-step problems

Solve the problems below using your knowledge of addition and subtraction. Use the boxes to complete your workings out. You will mostly need to use column addition and column subtraction. If you want a reminder on these methods, you can always look at the Kingslea Calculation Policy on the website.

1. The prices shown below are the costs of buying these items separately at a fast food restaurant.

95p	£2.45	£1.15

You can buy all three items together in a 'joy meal' for £3.99.
How much would you save if you bought two 'joy meals'?

£

2. Ticket prices for a local theme park are shown below.

one day ticket: £35.60
season ticket: £125

A season ticket lets you go to the theme park as many times as you want in one year. **How many times would you have to go in one year to make the season ticket worth buying?**
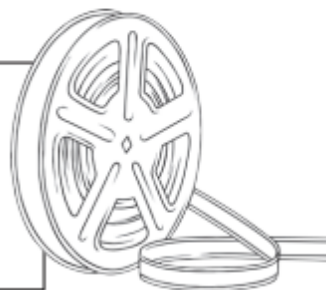
visits

3. Javeen goes to the cinema with her brother, mum and dad.
The ticket prices are shown below.

adult ticket: £12.45

child ticket: £7.25

family ticket (two adults, two children): £30.00

Javeen's dad buys a family ticket. **How much does he save doing this?**

£

Challenge:
4. Here are the viewing figures for two weekend TV shows.

TV Show	Saturday's Viewing Figures	Sunday's Viewing Figures
Dancing on Feet	3 236 874	5 468 698
The Next Big Voice	4 435 497	3 954 384

Which show had the most viewing figures altogether?
How many more viewers did it receive?