Order of Operations

BODMAS

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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	$10 \times 4 + 7 = 40 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$

Brackets

If there are brackets in a maths calculation,
you must calculate anything in the brackets first.

(4 + 5) × 3

So you calculate 4 + 5 first, then × 3

9 × 3 = **27**

Work out these calculations, remembering to calculate what is in the brackets first.

| 8 | 10 | 22 |

Order

These are any powers or roots, e.g. 5^2 and $\sqrt{49}$, you calculate them after any calculations in the brackets and before addition, subtraction, multiplication and division.

$7 + 5^2 \times 2$

$= 7 + 25 \times 2$

$= 7 + 50$

$\mathbf{= 57}$

Work out these calculations:

| 70 | 70 | 16 | 48 |

Division and Multiplication

Once you have carried out any calculations in brackets and any roots or powers, you then carry out any division or multiplication. As they are of the same importance, you complete them going from left to right.

$$100 \div 5 + 12 \times 3 + \textbf{(10 + 1)}$$
$$= \textbf{100} \div \textbf{5} + 12 \times 3 + 11$$
$$= 20 + \textbf{12} \times \textbf{3} + 11$$
$$= 20 + 36 + 11$$
$$= \textbf{67}$$

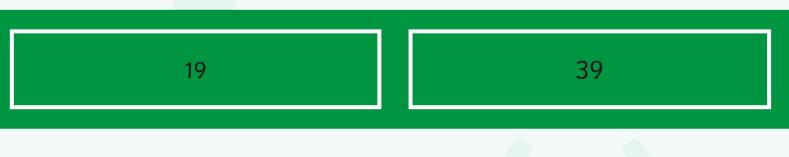Work out these calculations:

33	18

Addition and Subtraction

Addition and subtraction come next. Just like division and multiplication, they are equal so you complete the calculations going from left to right.

(21 + 4) × 4 + 10 − 5

= **25 × 4** + 10 − 5

= 100 + **10 − 5**

= **110 - 5**

= **105**

Work out these calculations:

19	39

Try these calculations using BODMAS

$50 - 15 + (3 \times 4) - 2^2$ 43

$(15 \times 3) + 24 - 10 + \sqrt{25}$ 64

$21 + (20 \div 4) \times 5 - 12 + 8$ 42