



BODMAS challenge

Use knowledge of the order of operations to carry out calculations involving the four operations

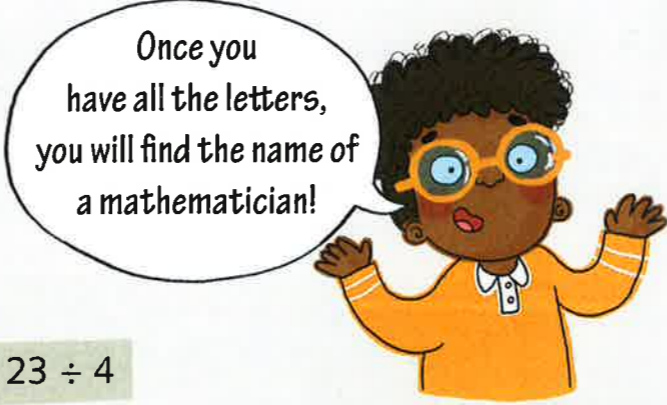
Can you make all the numbers from 1 to 20 using the four operations, brackets and the number 3?



Example
 $(3 + 3) \div 3 = 2$

Use the table below and the rules of BODMAS to work out the answers to the calculations and find the names of five well-known mathematicians.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z



Hint
 If a box is blue, it means you will need that letter twice.

1 $(50 \times 50) \div 25 - (10 \times 8)$ $(46 \times 32) \div 23 \div 4$
 $(156 + 65) - (298 - 85)$ $65 \times 9 + 7^2 - 627$
 $375 - (48 + 240) - 72$ $(75 + 69) \div 12 + 6$
 $400 - (99 + 282)$ $9^2 - (224 \div 4)$ $156 \times 2 \div (464 - 152)$

2 $(278 + 135) \times 2 - 803$ $(50 \times 50) \div 25 - (10 \times 8)$ $(630 \div 5) \div 3^2$
 $675 - (180 + 240) - 240$ $(921 - 436) \div (776 \div 8)$

3 $(50 \times 50) \div 25 - (10 \times 8)$ $724 - (941 - 220)$ $156 \times 2 \div (464 - 152)$
 $96 \div (2^2 \times 6)$ $400 - (99 + 282)$ $(75 + 69) \div 12 + 6$
 $(921 - 436) \div (776 \div 8)$

4 $96 \div (2^2 \times 6)$ $(75 + 69) \div 12 + 6$ $435 + 380 + 900 - 1706$
 $117 \times 2 \div (591 - 573)$ $(921 - 436) \div (776 \div 8)$ $400 - (99 + 282)$
 $(156 + 65) - (298 - 85)$ $724 - (941 - 220)$

5 $435 + 380 + 900 - 1706$ $375 - (48 + 240) - 72$ $(630 \div 5) \div 3^2$
 $72 \times 3 \div (591 - 555)$ $(386 + 275) - (699 - 40)$ $156 \times 2 \div (464 - 152)$
 $724 - (941 - 220)$

6 Now make up some calculations to spell the name of these mathematicians. Remember to use brackets.



Challenge 3 Play this game with a partner.

- Shuffle the cards and place them face down in a pile.
- Turn over four cards. If a 2 is turned over it stands for 'the power of 2'.
- Using all four digits on the cards and adding brackets and any operations, each person makes a calculation and works out the answer.
- Keep the calculation a secret and only tell the other player your answer.
- You both now try to work out each other's calculation.
- Score a point if you work out the calculation correctly.
- Play ten times, and the winner is the one with the most points.

You will need:
 • Resource 1:
 0-9 digit cards

