Name Date

1.. 2.. 3.. 4.. CHALLENGE

Use each of the digits 1, 2, 3 and 4 **once** in each calculation to make numbers from 1 to 20. Remember to use brackets!

You can use the digits in any order.

Example: (4 + 3 – 1) x 2 = 12

	= 1		= 11
	= 2	(4 + 3 – 1) x 2	= 12
	= 3		= 13
	= 4		= 14
	= 5		= 15
	= 6		= 16
	= 7		= 17
	= 8		= 18
	= 9		= 19
	= 10		= 20

Extension:

Can you also use the digits to make the numbers from 21 to 30?
One of these numbers is impossible to make without combining digits!

Name Date

1.. 2.. 3.. 4.. CHALLENGE

Use each of the digits 1, 2, 3 and 4 **once** in each calculation to make numbers from 1 to 20. Remember to use brackets!

Example: 3 x 4 – 2 – 1 = 9

Extension:

Can you also use the digits to make the numbers from 21 to 30?
One of these numbers is impossible to make without combining digits!

Name Date

1.. 2.. 3.. 4.. CHALLENGE ANSWERS

Use each of the digits 1, 2, 3 and 4 once in each calculation to make numbers from 1 to 20. Remember to use brackets!

There are several ways that you can make most of the numbers below. We have included an example for each number.

3 + 2 – 4 x 1	= 1	4 x 2 + 3 x 1	= 11
3 + 2 + 1 - 4	= 2	(4 + 3 – 1) x 2	= 12
4 + 2 – 3 x 1	= 3	(4 + 3) x 2 - 1	= 13
4 + 3 – 2 – 1	= 4	4 x 3 + 2 x 1	= 14
4 + 3 – 2 x 1	= 5	(4 + 2 – 1) x 3	= 15
4 + 3 + 1 - 2	= 6	(4 + 3 + 1) x 2	= 16
(4 – 2) x 3 + 1	= 7	(4 + 2) x 3 – 1	= 17
4 + 3 + 2 – 1	= 8	(4 x 1 + 2) x 3	= 18
3 x 4 – 2 – 1	= 9	(4 + 2) x 3 + 1	= 19
4 x 2 + 3 – 1	= 10	(3 x 1 + 2) x 4	= 20

Extension:

(3 + 2) x 4 + 1	= 21	(4 x 3 + 1) x 2	= 26
(4 x 3 – 1) x 2	= 22	(4 x 2 + 1) x 3	= 27
4 x 3 x 2 - 1	= 23	(3 x 2 + 1) x 4	= 28
4 x 3 x 2 x 1	= 24	impossible	= 29
(4 + 1) x (3 + 2)	= 25	(4 + 1) x 3 x 2	= 30

If you are allowed to combine digits, then you can make 29 using 32 – 4 + 1