

Maths Game

Cross It Out

A game for 2 players

You will need:

- A game board
- A pencil

Instructions

Version 1

Use game board 1 (with numbers 0 to 20)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Player 1 selects two numbers, crosses them out and then circles either their sum **or** their difference, e.g.

For example, player 1 selects **3** and **15** and crosses them out. They can now circle either:

$$15 + 3 = \mathbf{18}$$

or

$$15 - 3 = \mathbf{12}$$

Player 1 chooses to circle 18.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Player 2 then crosses out the circled number and another number that's still left (not crossed out). They circle either the sum or the difference of the two numbers.

For example, Player 2 selects 18 (the circled number) and 5 and crosses them out. They can now circle either:

$$18 + 5 = \mathbf{23}$$

or

$$18 - 5 = \mathbf{13}$$

As it is not possible to circle 23 (because the game board only goes up to 20), Player 2 has to circle 13.

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Player 1 crosses out the circled number and another number that's still left (not crossed out). They circle either the sum or the difference of the two numbers.

Players continue to take turns.

The winner is the player who stops their opponent from being able to move.

Version 2

Use game board 1 (with numbers 1 to 60).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Player 1 selects an even number and crosses it out, for example, 28.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Player 2 must now cross out a number that is a factor or a multiple of the number. Player 1 crossed out 28.

The factors of 28 are **1, 2, 4, 7, 14** and **28**

The multiples of 28 are **28** and **56**

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28 is already crossed out so cannot be selected. Player 2 chooses to cross out 14.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Player 1 must now cross out a number that is a factor or a multiple of the number Player 2 crossed out, i.e. 14.

The factors of 14 are **1, 2, 7** and **14**

The multiples of 14 are **14, 28, 42** and **56**

14 and 28 are already crossed out so can't be selected. Player 1 chooses to cross out 42.

Players continue to take turns.

The winner is the player who stops their opponent from being able to move.

Version 3

Use the game board with the numbers from 1-100.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

The rules are identical to Version 2. Because the game board goes up to 100, this is more difficult than Version 2 as there are more possibilities for factors and multiples.

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Information for Parents/Carers

For children in Years 1 and 2, ask them what the words sum and difference mean. If necessary, remind them that to find the sum means that they add the two numbers, i.e. the sum of 3 and 5 is 8. To find the difference means that they take away the smaller value number from the larger value number, i.e. the difference of 5 and 3 is $5 - 3$ which is 2.

Children in Year 1 might find it easier to have practical equipment, such as sweets, dried beans or 1p coins to help them with the calculations.

For children in Years 3 to 6, ask them what the words factor and multiple mean. If necessary, remind them that a multiple is the result of one number multiplied by another number, for example, 63 is a multiple of 9 because 9×7 is 63. A factor is a whole number that divides exactly into another number, for example, 9 is a factor of 63 because when you divide 63 by 9 there is no remainder

As a guide to which version of the game to play with your child:

Years 1 and 2: Version 1

Years 3 and 4: Version 2

Years 5 and 6: Version 3

To see this game in action, you can watch it on the LPDS YouTube channel here:

<https://www.youtube.com/watch?v=0zvpSR37ydl>

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Game Board 1

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

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Game Board 2

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

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11	12	13	14	15	16	17	18	19	20
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31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

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Game Board 3

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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51	52	53	54	55	56	57	58	59	60
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71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100