Clan Lines

A strategy game to develop multiplication skills

6	9	12	15	18	21	24	27		33
8	12	16		24	28	32		40	44
10	15	20			35	40		50	55
12	18	24	30	36	42		54		66
14	21	28	35	42	49	56	63	70	77
		32	40		56	64	72	80	88
18	27	36		54	63		81	90	99
20	30		50	60	70			100	110

This resource has been developed by Lexedio, on behalf of UHI North, West and Hebrides, as part of Highland Multiply – a project supported through the Highland Council and funded by the UK Government through the UK Shared Prosperity Fund.

About this game

Clan Lines is a fun way to develop numeracy skills using a multiplication table format and classic game elements, with a Highland twist.

It is designed to be played by 2 to 4 players and is suitable for adults and children who have been introduced to the concept of multiplication.

Learning goals

By playing this game, learners will develop their ability to:

* use the multiplication table to practise the 1 to 12 times tables;
* recognise that multiplications can be reversed to achieve the same answer, e.g. 3x4 and 4x3 both equal 12; and
* use multiplication to make strategic decisions.

Object

The object of the game is to unite your clan by aligning all five member pieces in a row on the board.
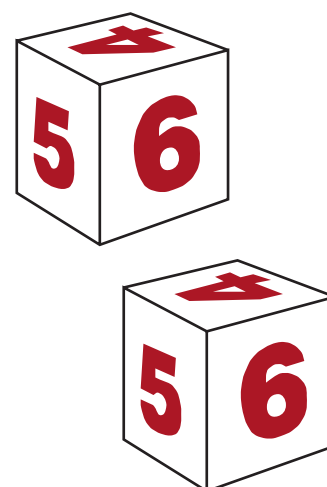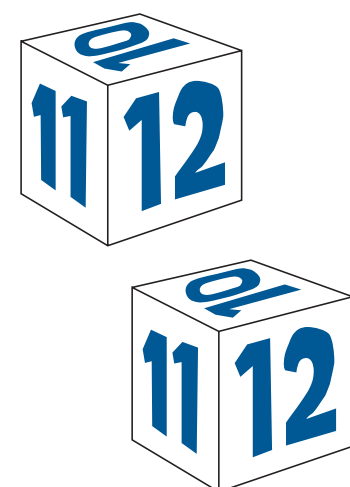
Game components

1 game board

✕	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

4 dice

2x low multipliers   **2x** high multipliers

**20 clan pieces
(5 per player)**

16 power cards

4x   **4x**   **4x**   **4x**

Choose a multiplier	Remove another player's piece	Nudge a piece	Roll again
✗ ?		← 👉	🎲🎲
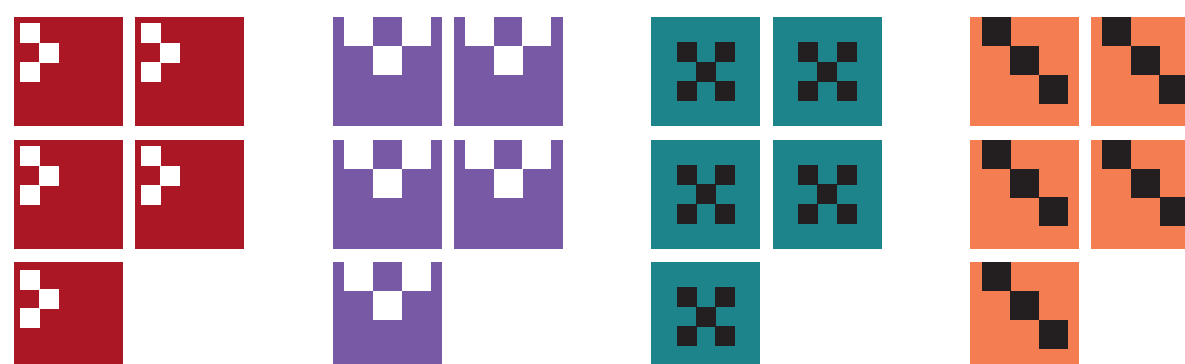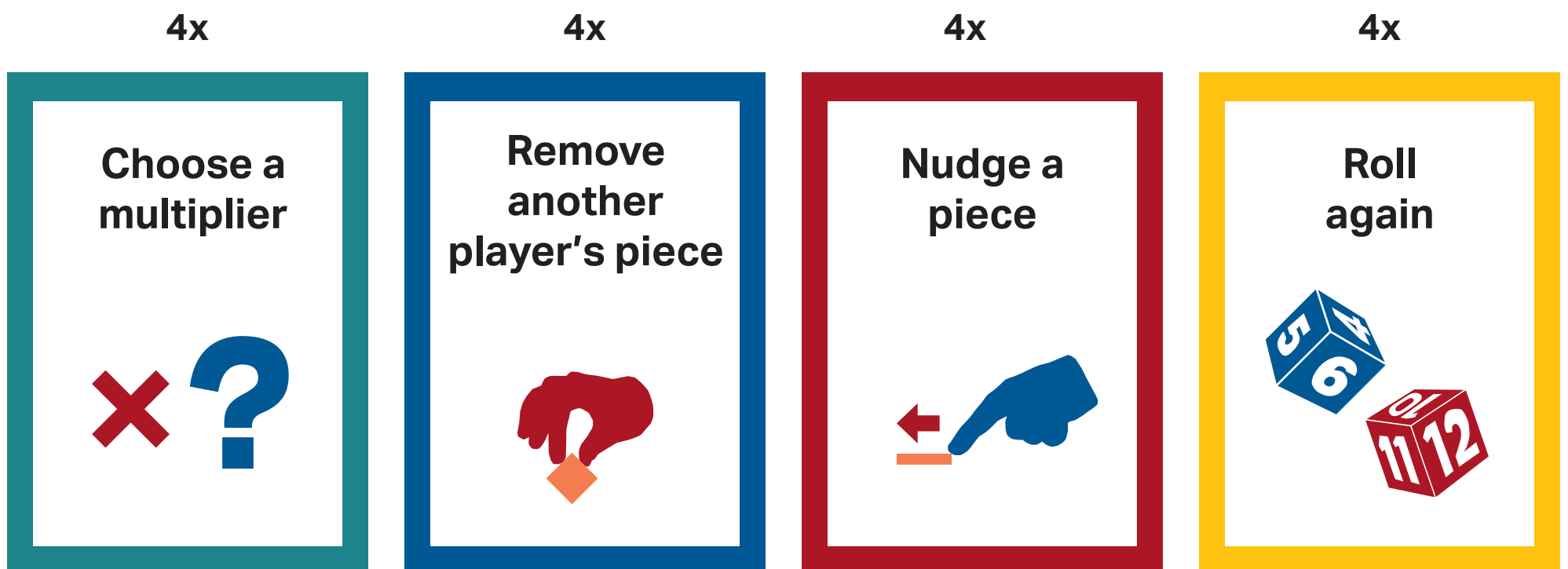
Setup

1. Print out all game components on pages 5-7 onto sheets of paper or card (one-sided, ideally A3).

2. Cut out the game board, clan pieces, cards, and dice.
   • You could strengthen some components by laminating or glueing them to cardboard e.g. cereal box.

3. Assemble the dice by folding and glueing the edges as directed.

4. Place the game board onto the table.
   • Tip: The board can be rotated during the game to give each player a clear view when it's their turn.

5. Shuffle the deck of power cards and place them face down next to the board.

6. Each player chooses a clan and places their five clan pieces next to the board.

7. Choose a player to go first. Play passes to the left and returns to the first player after each of the other players has had a turn.

Play

8. The first player starts the game by rolling two of the four dice. Each turn, they can choose whether to roll two low, two high, or one high and one low.

9. The numbers rolled on each die represent the **multiplicand** and the **multiplier**. The player uses the grid on the board to locate the **product** (correct answer) space. This can be done by locating the muliplicand on one axis and the multiplier on the other axis, then finding the product at the point where they intersect. The product will appear in two locations, unless they rolled 1x1 or 12x12.

Here is an example:

1st die: 2nd die:

3 x **7** = **21**

The player has rolled a low die and a high die, giving them a 3 and a 7.

3 x 7 = 21, so they need to locate 21 on the board. See two options on the next page.

21 can be found in two locations:

×	1	2	3	4	5	6	7	8
1	1	2	3	4	5	6	7	8
2	2	4	6	8	10	12	14	16
3	3	6	9	12	15	18	21	24
4	4	8	12	16	20	24	28	32
5	5	10	15	20	25	30	35	40
6	6	12	18	24	30	36	42	48
7	7	14	21	28	35	42	49	56

×	1	2	3	4	5	6	7	8
1	1	2	3	4	5	6	7	8
2	2	4	6	8	10	12	14	16
3	3	6	9	12	15	18	21	24
4	4	8	12	16	20	24	28	32
5	5	10	15	20	25	30	35	40
6	6	12	18	24	30	36	42	48
7	7	14	21	28	35	42	49	56

10. The player then places their first clan piece on a correct product location on the board, marking the end of their turn.

11. Each player takes their turn to roll two dice and place their clan pieces onto the board, one per turn, until all five of their clan are in play.

12. When all five clan pieces are on the board, players can start to move them to new product locations. Each turn, a player must roll the dice. They can then move one of their pieces to the product location rolled or choose not to move this turn.

13. If a player rolls the dice to give a product that is already held by one of their clan pieces, they can either occupy an unoccupied adjacent space, or nudge the occupying piece one space in any direction instead. See "Nudge a piece" power card for rules.

14. If a player rolls the dice to give a product occupied by another player, they can choose to replace the other player's clan piece and remove it from the board. The other player must then bring their removed piece back into play on their next turn.

15. If a player makes one or more new rows of 3 or 4 clan pieces during their turn, they can pick up a power card from the top of the deck (see next page for rules).

- Rows can be horizontal, vertical, or diagonal lines.
- An extension of an existing row counts as a new row.

16. The first player to form a row of five clan pieces wins the game. See examples below:

1	2	3	4	5	6	7
2	4	6	8	10	12	14
3	6	9	12	15	18	21
4	8	12	16	20	24	28
5	✚	✚	✚	✚	✚	35
6	12	18	24	30	36	42
7	14	21	28	35	42	49

20	25	30	35	4
24	30	✖	42	4
28	35	✖	49	5
32	40	✖	56	6
36	45	✖	63	7
40	50	✖	70	8
44	55	66	77	8

5	6	7	8	9	10	11
5	6	◆	8	9	10	11
10	12	14	◆	18	20	22
15	18	21	24	◆	30	33
20	24	28	32	36	◆	44
25	30	35	40	45	50	◆
30	36	42	48	54	60	66

Power cards

Power cards can be picked up whenever a new row is created, including during the early game, before all clan pieces have entered play. However, they can only be used when all five of their clan pieces are on the board.

Power cards are picked up at the end of a turn. They can be played upon the next turn, or reserved for a later turn. Only one power card can be played per turn.

After a power card has been played, it should be placed at the bottom of the deck.

Choose a multiplier

This card can be played at the start of a new turn. Instead of rolling two dice, the player will roll one die to determine the multiplicand. They then choose any number between 1 and 12 as the multiplier.

Remove another player's piece

This card can be played before or after rolling the dice. It allows the player to remove one of another player's clan pieces from the board. The other player must then bring their removed piece back into play on their next turn.

Nudge a piece

This card enables the player to nudge one of their own clan pieces, or one of another player's clan pieces, one space in any direction.

- If a clan piece is at the edge of the board, it can be nudged off the board and taken out of play.
- Clan pieces can only be nudged into unoccupied spaces. The nudge move cannot be used to knock another piece out of play.

Roll again

This card can be used after rolling the dice at the start of the turn, to give the player another turn. The player can choose to move a piece after each roll, or not to move after either turn.

Game board

Cut out the game board below.

✕	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Clan pieces

Cut out 20 individual playing pieces.

There should be five matching pieces per player.
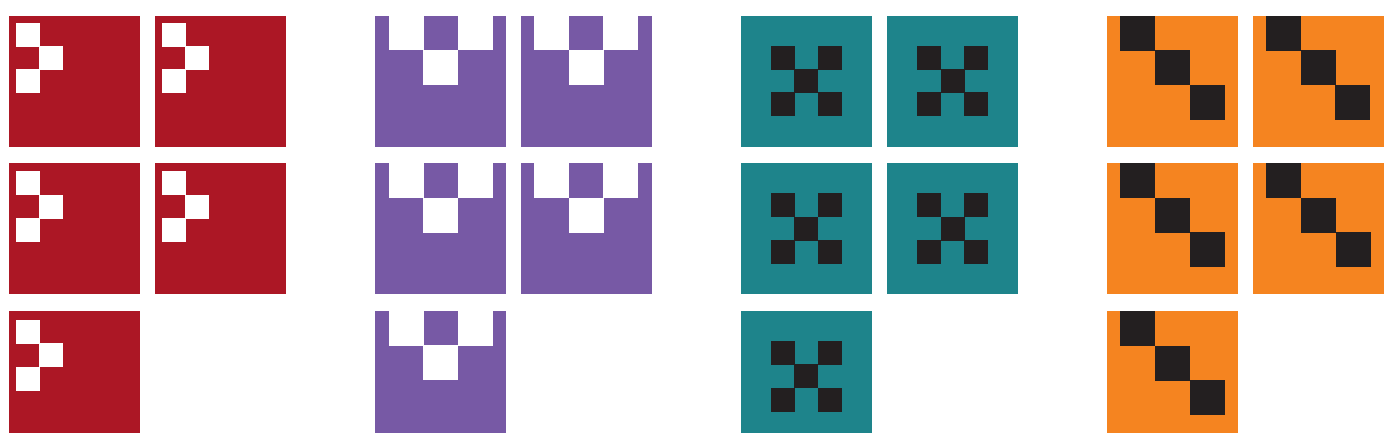
Dice

Cut out the four dice nets below. Fold along the dotted lines and glue the flaps to create four cubes.
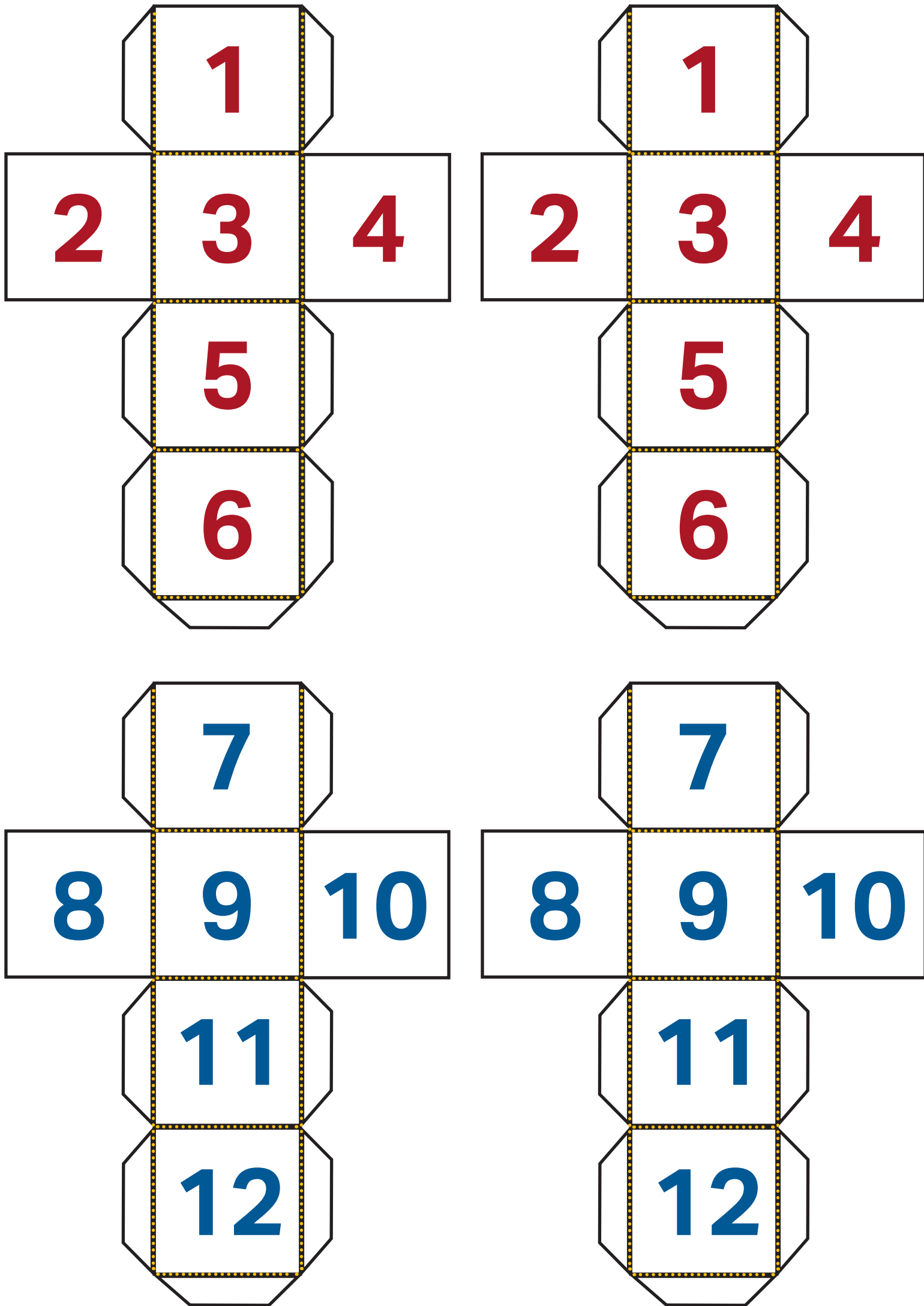
Dice converter

If you would prefer to use traditional dice to play the game, you can do this by deciding whether each die is high or low and then using this conversion table:

	•	••	•••	••••	•••••	••••••
Low	1	2	3	4	5	6
High	7	8	9	10	11	12

Power cards

Cut out the 16 individual cards below.

Choose a multiplier	Remove another player's piece	Nudge a piece	Roll again
Choose a multiplier	Remove another player's piece	Nudge a piece	Roll again
Choose a multiplier	Remove another player's piece	Nudge a piece	Roll again
Choose a multiplier	Remove another player's piece	Nudge a piece	Roll again