



Friday



- For Maths week London, this week's maths will be problem solving activities online and offline for you to do.
- For more information and other activities go here - <https://www.mathsweeklondon.org/>



- Today's activities are some maths games to play with a partner. Have a go at one or more of them and think about the maths involved.
- For some of the games you will need:
 - Dice – interactive here - <https://nrich.maths.org/6717>
 - 1-20 number line – draw your own or print from here - <https://nrich.maths.org/content/id/10094/Four%20Go.pdf>

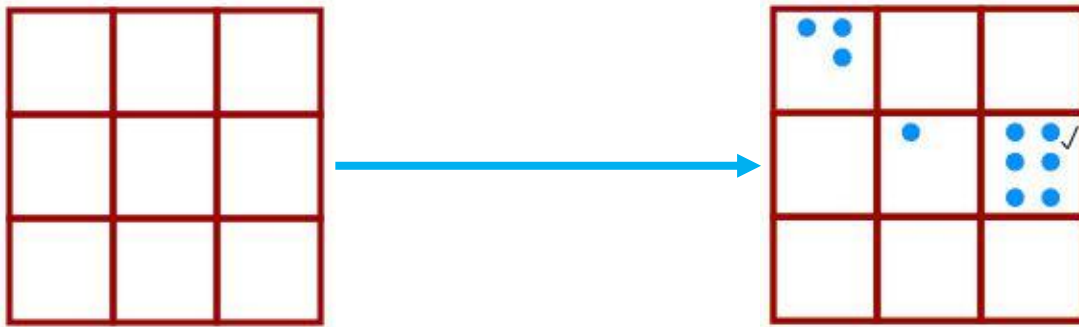
Dotty six – 2 player game

You need:

- 6 sided dice
- A partner
- 3x3 grid

Take turns with the adult to throw the dice and draw that number of dots in one of the boxes on the grid.

Put *all* of your dots in one of the boxes. You can't split them up and you can't have more than six dots in a box. When a box is full, you could put a tick in the corner like this:



Keep going until there are three ticks in a row or column or diagonal. The winner is the person who puts the last tick.

Now, can you change the game to make your own version?
How do you know where to put your dots?

Four Go – 2 player game

You need:

- 1-20 number line
- A partner

Player One chooses two numbers in this grid and either multiplies or divides them.

100	25	5
10	2	36
12	4	3



They then mark the answer to the calculation on the number line. Player Two then choose two numbers and either \times or \div , and mark that number in a different colour on the number line.

If the answer is too big or too small to be marked on the number line, the player misses a go. The winner is the person to get four marks in a row with none of their opponent's marks in between.

What good ways do you have of winning the game?

Does it matter if you go first or second?

How are you deciding which number to aim for next?

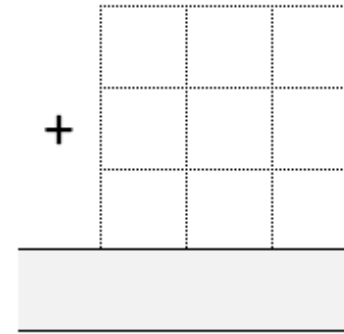
Can you find a winning strategy?

Dicey Operations in Line– 2 player game

Take turns to throw the dice and decide which of your cells to fill. This can be done in two ways: either fill in each cell as you throw the dice or collect all your numbers and then decide where to place them.

Game 1

Each of you draw an addition grid like this:



Throw the dice nine times each until all the cells are full.

Whoever has the sum closest to 1000 wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game.
- Each player works out the difference between their result and 1000 after each round.

They keep their running total. First to 5000 loses.

You can vary the target to make it easier or more difficult.

You need:

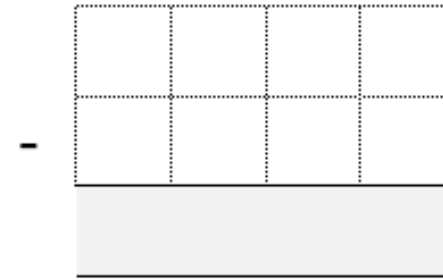
- 6 sided dice or a 0-9 spinner
- A partner
- A scoring sheet
 - square paper or <https://nrich.maths.org/content/id/10093/Dicey%20operations%20for%20two.pdf>

Dicey Operations in Line– 2 player game

Take turns to throw the dice and decide which of your cells to fill. This can be done in two ways: either fill in each cell as you throw the dice or collect all your numbers and then decide where to place them.

Game 2

Each of you draw a subtraction grid like this:



Throw the dice eight times each until all the cells are full.

Whoever has the difference closest to 1000 wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game.
- Each player works out the difference between their result and 1000 after each round.

They keep their running total. First to 5000 loses.

You can vary the target to make it easier or more difficult.

You need:

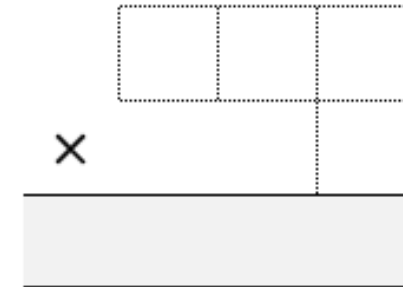
- 6 sided dice or a 0-9 spinner
- A partner
- A scoring sheet
 - square paper or <https://nrich.maths.org/content/id/10093/Dicey%20operations%20for%20two.pdf>

Dicey Operations in Line– 2 player game

Take turns to throw the dice and decide which of your cells to fill. This can be done in two ways: either fill in each cell as you throw the dice or collect all your numbers and then decide where to place them.

Game 3

Each of you draw a multiplication grid like this:



Throw the dice four times each until all the cells are full.

Whoever has the product closest to 1000 wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game.
- Each player works out the difference between their result and 1000 after each round.

They keep their running total. First to 5000 loses.

You can vary the target to make it easier or more difficult.

You need:

- 6 sided dice or a 0-9 spinner
- A partner
- A scoring sheet
 - square paper or <https://nrich.maths.org/content/id/10093/Dicey%20operations%20for%20two.pdf>