

Supporting your child with maths in Reception and Key Stage 1



Reception

Recognising numbers

Choose a number for the week, e.g. 2.

Encourage your child to look out for this number all the time.

- Can your child see the number 2 anywhere?
 - at home**
 - in the kitchen
 - on pages in a book
 - in the street**
 - on doors
 - on car number plates
 - on buses
 - while out shopping**
 - on the shop till
 - on shelves
 - in shop windows
- Find two apples, toys, spoons, straws, sweets, etc.
- Make patterns, such as two knives, two forks, two spoons, two knives, two forks, two spoons...
- Practise writing the number 2.

Choose a different number each week.

Dice game

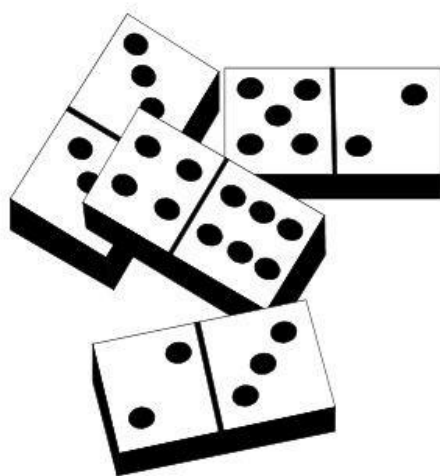
Use a 'dotted' dice and write the numbers 1 to 6 on a sheet of paper (or use the numbered animals).

- Throw the dice. Can your child guess how many dots there are? Check by counting.
- Ask your child which number on the paper matches the dots on the dice.

Dominoes

Play dominoes matching the numbers.

Find all the dominoes that have 5 spots – how are the spots arranged?



Counting and putting numbers in order

Use old magazines, comics or greetings cards.

Cut out pictures of animals, or anything else your child is interested in. Label the animals 1 to 5.



- Shuffle the animals. Put them in order from 1 to 5.
- Remove one animal. Ask your child which number is missing. Repeat with other numbers and more than one missing number.
- Ask your child to say what number comes before or after a number you choose.

When your child can do this, repeat with numbers 1 to 10.

Build a tower

For this game you need a dice and some building blocks or lego bricks.

- Take turns.
- Roll the dice.
- Collect the number of bricks to build your own tower.
- The first to 10 wins!



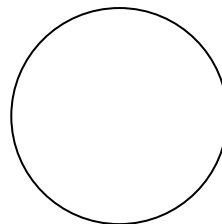
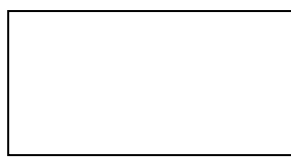
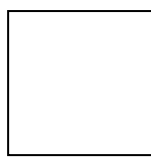
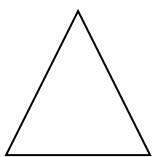
For a change, start with 10 blocks or bricks each. Take away the number on the dice. First to exactly zero wins.

Roll a shape

Cut out 12 shapes.

Make 3 triangles, 3 squares, 3 rectangles and 3 circles.

- Take turns to roll a dice and collect a shape that has that number of sides, e.g. roll a 4, collect a square.
- The first to have four different shapes wins.
- If you can name each shape you go first next time!

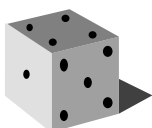


Rhymes

Teach your child any number rhymes or songs that you know, particularly ones that involve holding up a number of fingers, like *Five little speckled frogs*. Practise them regularly, with actions.

Dicey counting

Take turns to roll a dice and count back to zero from the number thrown. For example:



Four, three, two, one, zero!

One more, one less

For this game you need a dice, a coin and some building blocks or Lego bricks.

- Take turns to roll the dice.
- Build a tower with that number of blocks or bricks.
- Then toss the coin. Heads means take one brick off. Tails means add one on.
- If you can guess how many bricks there will be after this, you keep them!
- The first to collect 20 bricks or more wins!

Counting

Practise counting. Start at 5, and count on from there to 11.

5 6 7 8 9 10 11

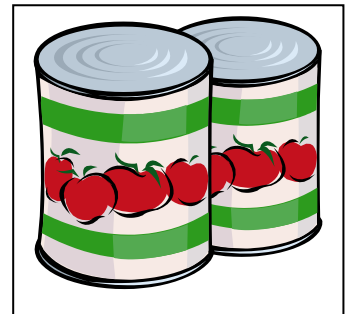
Start at 9, count back from there to zero.

9 8 7 6 5 4 3 2 1 0

Choose a different starting number each time.

Cupboard maths

Ask your child to help you sort a food cupboard out, putting **heavier** items on the lower shelf and **lighter** items on an upper shelf.



Collections

You need something to collect, e.g. sticky shapes, dried beans.

- In turn, one player claps 1, 2, 3, or 4 times while the other player closes his eyes and listens.
- How many claps did you hear? Take that number of shapes.
- The first to make a pattern with 12 sticky shapes wins.

Spot the difference

Draw a row of six big coloured spots.

- In turn, one player closes his or her eyes.
- The other player hides some of the spots with a sheet of paper.
- The first player looks and says how many spots are hidden.
- Try with other numbers of spots, e.g. five or seven.

Shape activity

At home, or when you are out, look at the surface of shapes.

- Ask your child – what shape is this plate, this mirror, the bath mat, the tea towel, the window, the door, the red traffic light, and so on.
- Choose a shape for the week, e.g. a square.
How many of these shapes can your child spot during the week, at home and when you are out?

Dice game



You need a 1–6 dice, paper and pencil.

- Take turns.
- Choose a number between 1 and 10 and write it down.
- Throw the dice and say the dice number.
- Work out the difference between the chosen number and the dice number, e.g. if you wrote down a 2 and the dice shows 5, the difference is 3.

You could also draw a number line to help your child to see the difference between the two numbers.

KSI

How old?

Start with your child's age. Ask your child:

How old will you be when you are 1 year older?

How old were you last year?

How old will you be 10 years from now?



Secret numbers

- Write the numbers 0 to 20/100 on a sheet of paper.
- Ask your child secretly to choose a number on the paper. Then ask him / her some questions to find out what the secret number is, e.g.

Is it less than 10?

Is it between 10 and 20?

Does it have a 5 in it?

Is it greater than 15?

He / she may answer only yes or no.

- Once you have guessed the number, it is your turn to choose a number. Your child asks the questions.

Use numbers appropriate to your child's age.

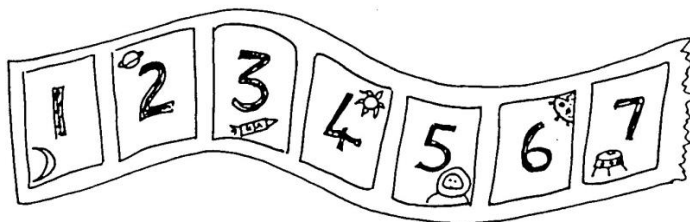
For a harder game ask more challenging questions eg.

Is it a multiple of 2?

Is it a multiple of 5?

Track games

Make a number track to 20, or longer. Decorate it with your child so it relevant to your child's interests – sea world, space, monsters... Then play games on it.



- Throw a dice. Move along that number of spaces. BUT before you move, you must work out what number you will land on. If you are wrong, you don't move! The winner is the first to land exactly on 20. Now play going backwards to 1.
- Throw a dice. Find a number on the track that goes with the number thrown to make either 10 or 20. Put a counter on it, e.g. you throw a '4' and put a counter on either 6 or 16. If someone else's counter is there already, you may replace it with yours! The winner is the first person to have a counter on 8 different numbers

Cupboard maths



- Choose two tins or packets from your food cupboard.
- Ask your child to hold one in each hand and tell you which is heavier, and which is lighter. (Check by reading the weight on each tin or packet.)
- If he / she is right, they keep the lighter one. Then choose another item from the cupboard, trying to find one that is lighter still.
- Carry on until your child has found the lightest item in the cupboard. It might be suitable to eat as a prize!

Takings

For this game you will need a dice and a collection of small things such as Lego bricks, sticky shapes or dried beans. You will also need pencil and paper.

- Take turns.
- Roll a dice. Take that number of beans. Write down the number.
- Keep rolling the dice and taking that number of beans. BUT, before you take them, you must write down your new total.

For example, Sally has 7. She throws 4. She has to work out how many she will have now. She starts counting from seven: *eight, nine, ten, eleven*. She writes 11.

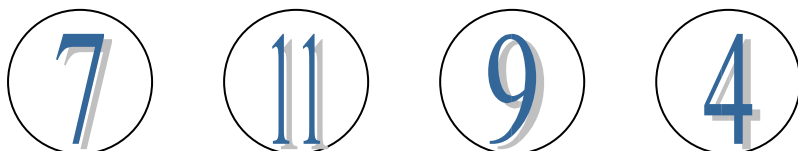
- You can only take your beans if you are right.
- The first person to collect 20 beans wins!



Adding circles

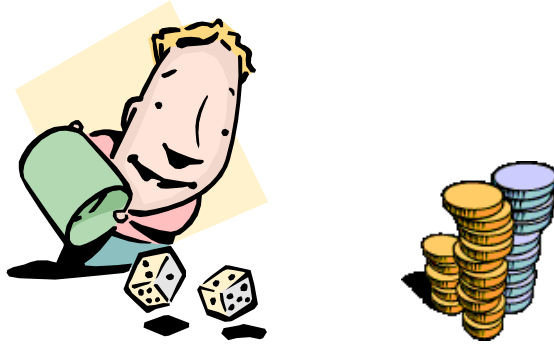
For this game, you need a dice and pencil and paper.

- Each of you should draw four circles on your piece of paper. Write a different number between 2 and 12 in each circle.



- Roll the dice twice. Add the two numbers.
- If the total is one of the numbers in your circles then you may cross it out.
- The first person to cross out all four circles wins.

A similar game can be played by subtracting the number you throw for 20. What numbers could you write in the circles if you were playing this version?



Dicey coins

For this game you need a dice and about twenty 10p coins.

- Take turns to roll the dice and take that number of 10p coins.
- Guess how much money this is. Then count aloud in tens to check, e.g. *saying ten, twenty, thirty, forty...*
- If you do this correctly you keep one of the 10p pieces.
- First person to collect £1 wins.
- Don't forget to give the coins back!

The same game could be played with 2p, 5p or 20p coins although you may need to adjust the target number.

Out and about

On the way to school, see how many cuboids, spheres and cylinders you can spot.
Which did you see most of?

Car number bingo

- Each person chooses a target number, e.g. 10. Think about which pairs of numbers add to make your target.
- You have to see a car that has two numbers that add up to your target number.

K456 XWL

- Say: $4 + 6 = 10$, bingo!
- Change the target number each week.

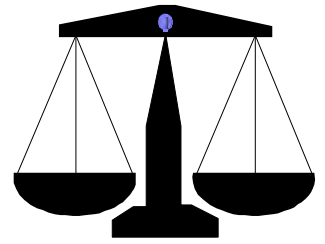
You can extend this activity by looking for three numbers which add up to your target number.

Games with more challenge

How heavy?

You will need some kitchen scales that can weigh things in kilograms.

- Ask your child to find something that weighs close to 1 kilogram.
- Can he / she find something that weighs exactly 1 kilogram?
- Find some things that weigh about half a kilogram.



Out and about

- During a week, look outside for 'thirties' numbers, such as 34 or 38, on house doors, number plates, bus stops, etc. How many can you spot? What is the biggest one you can find?
- Next week, look for 'fifties' numbers, or 'sixties'...



How much

- Once a week, tip out the small change from a purse. Count it up with your child.

Number facts

You need a 1–6 or 1–9 dice.

- Take turns. Roll the dice. See how quickly you can say the number to add to the number on the dice to make 10 or 20, e.g.



add 6 is equal to 10

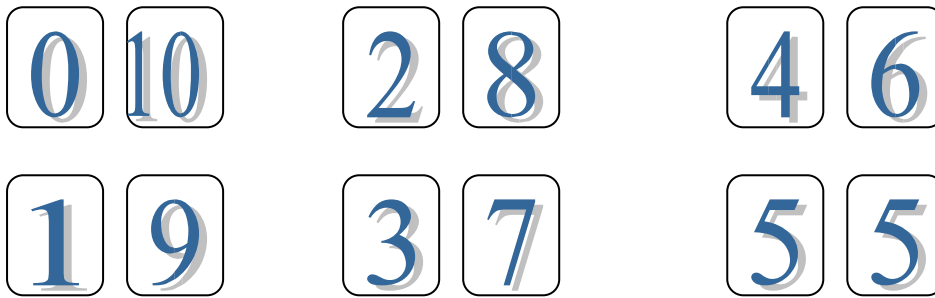
- If you are right, you score a point.
- The first to get 10 points wins.

You can extend this activity by making the two numbers add up to 20, or 50.

Speedy pairs to 10

Make a set of 12 cards showing the numbers 0 to 10, but with two 5s. If you wish, you could use playing cards.

- Shuffle the cards and give them to your child.
- Time how long it takes to find all the pairs to 10.



Repeat later in the week. See if your child can beat his / her time. For more challenge shuffle the cards and place them face down so your child has to remember where they saw numbers.

You could adapt this game to practise number bonds for other numbers up to 10.

Guess my shape

- Think of a 2-D shape (triangle, circle, rectangle, square, pentagon or hexagon). Ask your child to ask questions to try and guess what it is.
- You can only answer Yes or No. For example, your child could ask: *Does it have 3 sides?* or: *Are its sides straight?*
- See if he can guess your shape using fewer than five questions. Now ask them to choose a shape so you can ask questions.

Car numbers

- Each person chooses a target number, e.g. 15.
- How many car numbers can you spot with 3 digits adding up to your target number, e.g. K456 XWL.
- So $4 + 5 + 6 = 15$, bingo!

Bean subtraction

For this game you need a dice and some dried beans or buttons.

- Start with a pile of beans in the middle. Count them.
- Throw a dice. Say how many beans will be left if you subtract that number.
- Then take the beans away and check if you were right!
- Keep playing.
- The person to take the last bean wins!

Board games

Make a board like this.

The numbers are arranged differently from usual, but the games will still work if you use a normal snakes and ladders board.

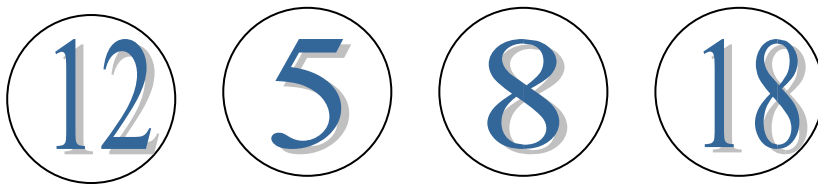
91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

- Roll a dice twice. Add the two numbers.
- Move along that number of spaces. Before you move, you must work out what number you will land on.
- If you are wrong, you don't move!
- The first to the end of the board wins.

For a change, you could roll the dice and move backwards. Or you could roll the dice once, then move the number that goes with your dice number to make 10, e.g. throw a 3, move 7.

Circle trios

Draw four circles each on your piece of paper. Write four numbers between 3 and 18, one in each circle.
e.g.



- Take turns to roll a dice three times and add the three numbers.
- If the total is one of the numbers in your circles then you may cross it out.
- The first to cross out all four circles wins.

Shopping maths

After you have been shopping, choose 6 different items each costing less than £1.

Make a price label for each one, e.g. 39p, 78p. Shuffle the labels.

Then ask your child to do one or more of these:

- Place the labels in order, starting with the lowest.
- Say which price is an odd number and which is an even number.
- Add 9p to each price in their head.
- Take 20p from each price in their head.
- Say which coins to use to pay exactly for each item.
- Choose any two of the items, and find their total cost.
- Work out the change from £1 for each item.



Straight lines

Choose 4 different lengths between 5 and 20 centimetres. Use a ruler marked in centimetres. Draw lines of each length.



Websites:

There are a number of websites that have excellent maths games that will help your child practise what they have been learning in school.

These include:

www.mathszone.co.uk <http://www.topmarks.co.uk/>

<http://topicbox.net/mathematics/>

<http://www.oxfordowl.co.uk/for-home/maths-site/expert-help--2/maths-inschool>

<http://nrich.maths.org/frontpage>

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