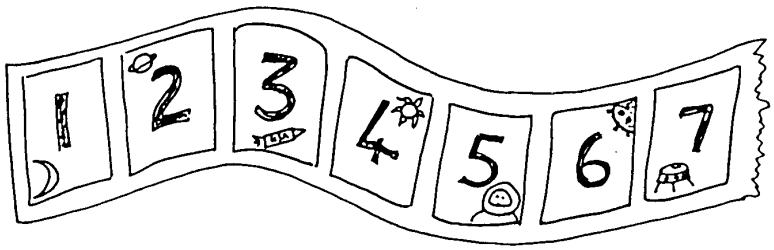
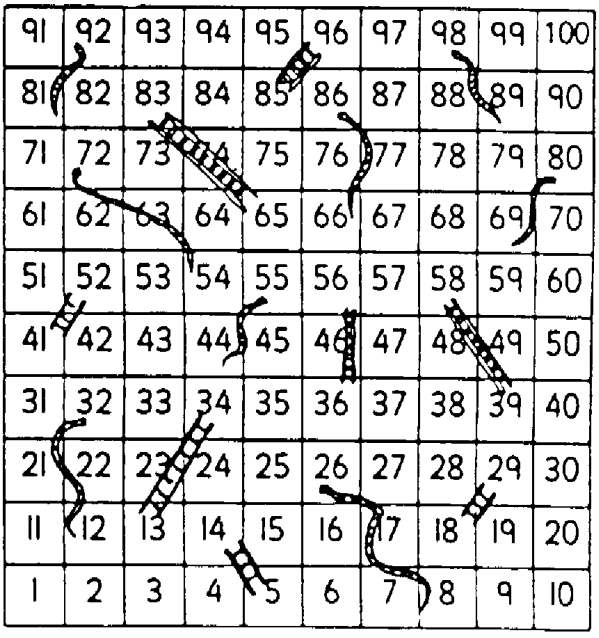


Activities For Parents & Children

Key Stage 2



Year 3

Can you tell the time?

Whenever possible, ask your child to tell you the time to the nearest 5 minutes. Use a clock with hands as well as a digital watch or clock.
Also ask:

- What time will it be one hour from now?
- What time was it one hour ago?

Time your child doing various tasks, e.g.

- getting ready for school;
- tidying a bedroom;
- saying the 5 times, 10 times or 2 times table…

Ask your child to guess in advance how long they think an activity will take. Can they beat their time when they repeat it?

Fractions

Use 12 buttons, or paper clips or dried beans or…

- Ask your child to find **half** of the 12 things.
- Now find one **quarter** of the same group.
- Find one **third** of the whole group.

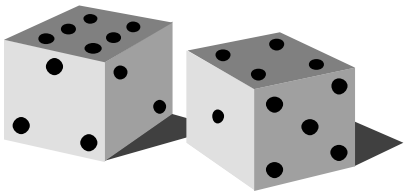
Repeat with other numbers.

Order, order!

- Each of you should draw 6 circles in a row.
- Take turns.
- Roll two dice and make a two-digit number (see Number games).
- Write the number in one of your circles. Once the number is written in a circle you cannot change it or move it!
- The first to get all six of their circle numbers in order wins.

Number games

Roll two dice. Make two-digit numbers, e.g. if you roll a 6 and 4, this could be 64 or 46. If you haven't got two dice, roll one dice twice. Ask your child to do one or more of the activities below.



- Count on or back from each number in tens.
- Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
- Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
- Double each number.

Board games

For these games you need to sketch a board like this. Notice how the numbers are arranged.

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

- Start on 1. Toss a coin. If it lands heads, move 1 place along. If it lands tails, add 10, saying the total correctly before moving. First person to reach the bottom row wins.
- Start anywhere on the board. Roll a dice. Even numbers move you forwards and odd numbers move you backwards. If you land on a multiple of five, you can move either 10 forwards or 10 backwards. The first person to reach either the top or bottom of the board wins.

Up and down the scales

- Guess with your child the weights of people in your home.
- Then weigh them (if they agree!). Help your child to read the scales.
- Record each weight, then write all the weights in order.

Repeat after two weeks. What, if any, is the difference in the weights?

Bean race

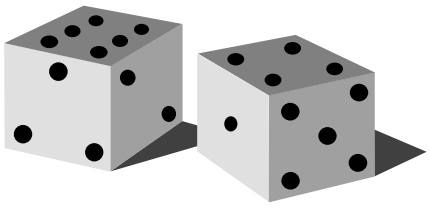
You need two dice and a pile of dried beans.

- Take turns to roll the two dice.
- Multiply the two numbers and call out the answer.
- If you are right, you win a bean.
- The first to get 10 beans wins.

Make 20

For this game you need to write out numbers 0 to 20 on a piece of paper. Make them big enough to put counters or coins on.

- Take turns. Roll a dice. Put a coin on the number that goes with the dice number to make 20, e.g. throw a '4' and put a coin on 16.
- If someone else's counter is there already, replace it with yours!
- The first person to have counters on 6 different numbers wins.
- Now roll two dice, add the numbers together and look for a number to make 20. The first with coins on 10 different numbers wins.



Guess my number

Choose a car number you can see, e.g. 592.

- Add 10 to the number in your head. Say the answer aloud.
- Can your child guess which car you were looking at? If so she or he can have a turn next.

Secret sums

- Ask your child to say a number, e.g. 43.
- Secretly do something to it (e.g. add 30). Say the answer, e.g. 73.
- The child then says another number to you, e.g. 61.
- Do the same to that number and say the answer.
- The child has to guess what you are doing to the number each time!
- Then they can have a turn at secretly adding or subtracting something to each number that you say to them.

Cupboard maths

Ask your child to look at the weights printed on jars, tins and packets in the food cupboard, e.g.

tinned tuna 185g

tinned tomatoes 400g

jam 454g

Choose six items. Ask your child to put them in order. Is the largest item the heaviest?

Bingo!

One person has the 2x table and the other has the 5x table. Write six numbers in that table on your piece of paper, e.g.

4 8 10 16 18 20

- Roll one or two dice. If you choose to roll two dice, add the numbers, e.g. roll two dice, get 3 and 4, add these to make 7.
- Multiply that number by 2 or by 5 (that is, by your table number, e.g. 7 x 2 or 7 x 5).
- If the answer is on your paper, cross it out.
- The first to cross out all six of their numbers wins.

Year 4

Number game 3

Use three dice.

If you have only one dice, roll it 3 times.

- Make three-digit numbers, e.g. if you roll 2, 4 and 6, you could make 246, 264, 426, 462, 624 and 642.
- Ask your child to round the three-digit number to the nearest multiple of 10. Check whether it is correct, e.g.

  76 to the nearest multiple of 10 is 80.

  134 to the nearest multiple of 10 is 130.
- (A number ending in a **5** always **rounds up**.)
- Roll again. This time round three-digit numbers to the nearest 100.

Tables

Practise the 3x, 4x and 5x tables. Say them forwards and backwards.

Ask your child questions like:

What are five threes? What is 15 divided by 5?

Seven times three? How many threes in 21?

Measuring

Use a tape measure that shows centimetres.

- Take turns measuring lengths of different objects, e.g. the length of a sofa, the width of a table, the length of the bath, the height of a door.
- Record the measurement in centimetres, or metres and centimetres if it is more than a metre, e.g. if the bath is 165 cm long, you could say it is 1m 65cm (or 1.65m).
- Write all the measurements in order.

Number game 1

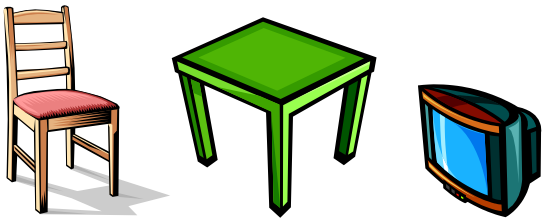
You need about 20 counters or coins.

- Take turns. Roll two dice to make a two-digit number, e.g. if you roll a 4 and 1, this could be 41 or 14.
- Add these two numbers in your head. If you are right, you win a counter. Tell your partner how you worked out the sum.
- The first to get 10 counters wins.

Now try subtracting the smaller number from the larger one.

Number game 2

- Put some dominoes face down.
- Shuffle them.
- Each choose a domino.
- Multiply the two numbers on your domino.
- Whoever has the biggest answer keeps the two dominoes.
- The winner is the person with the most dominoes when they have all been used.



Looking around

Choose a room at home.

Challenge your child to spot 20 right angles in it.

Dicey division

You each need a piece of paper. Each of you should choose five numbers from the list below and write them on your paper.

5 6 8 9 12 15 20 30 40 50

- Take turns to roll a dice. If the number you roll divides exactly into one of your numbers, then cross it out, e.g. you roll a 4, it goes into 8, cross out 8.
- If you roll a 1, miss that go. If you roll a 6 have an extra go.
- The first to cross out all five of their numbers wins.

Sum it up

- Each player needs a dice.
- Say: *Go!* Then each rolls a dice at the same time.
- Add up all the numbers showing on your own dice, at the sides as well as at the top.
- Whoever has the highest total scores 1 point.
- The first to get 10 points wins.

Out and about

- Choose a three-digit car number, e.g. 569.
- Make a subtraction from this, e.g. 56 – 9.
- Work it out in your head. Say the answer.
- If you are right, score a point.
- The first to get 10 points wins.

Dicey tens

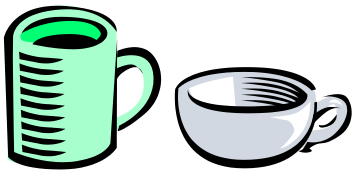
For this game you need a 1–100 square (a snakes and ladders board will do), 20 counters or coins, and a dice.

- Take turns.
- Choose a two-digit number on the board e.g. 24.
- Roll the dice. If you roll a 6, miss that turn.
- Multiply the dice number by 10, e.g. if you roll a 4, it becomes 40.
- Either add or subtract this number to or from your two-digit number on the board, e.g. 24 + 40 = 64.
- If you are right, put a coin on the answer.
- The first to get 10 coins on the board wins.

Pairs to 100

This is a game for two players.

- Each draw 10 circles. Write a different two-digit number in each circle – but not a 'tens' number (10, 20, 30, 40…).
- In turn, choose one of the other player's numbers.
- The other player must then say what to add to that number to make 100, e.g. choose 64, add 36.
- If the other player is right, she crosses out the chosen number.
- The first to cross out 6 numbers wins.



Mugs

You need a 1 litre measuring jug and a selection of different mugs, cups or beakers.

- Ask your child to fill a mug with water.
- Pour the water carefully into the jug.
- Read the measurement to the nearest 10 millilitres.
- Write the measurement on a piece of paper.
- Do this for each mug or cup.
- Now ask your child to write all the measurements in order.

All the sixes

Time your child while he / she does one or more of these.

- Count in sixes to 60.
- Count back in sixes from 60 to zero.
- Start with 4. Count on in sixes to 70.
- Start with 69. Count back in sixes to 3.

Next week, try to beat the record.

Left overs

- Take turns to choose a two-digit number less than 50.
- Write it down. Now count up to it in fours. What number is left over?
- The number left is the number of points you score, e.g.

  Choose 27.
  Count: *4, 8, 12, 16, 20, 24.*
  3 left over to get to 27.
  So you score 3 points.

- The first person to get 12 or more points wins.

Now try the same game counting in threes, or in fives.
Can you spot which numbers will score you points?

Year 5

Decimal number plates

- Each choose a car number plate with three digits.

- Choose two of the digits, e.g. 4 and 6. Make the smallest and largest numbers you can, each with 1 decimal places, e.g. 4.6 and 6.4.
- Now find the difference between the two decimal numbers,
- e.g. 6.4 – 4.6 = 1.8.
- Whoever makes the biggest difference scores 10 points.
- The person with the most points wins.

Play the game again, but this time score 10 points for the smallest difference, or 10 points for the biggest total.

Finding areas and perimeters

Perimeter = distance around the edge of a shape
Area of a rectangle = length x breadth (width)

- Collect 5 or 6 used envelopes of different sizes.
- Ask your child to estimate the perimeter of each one to the nearest centimetre. Write the estimate on the back.
- Now measure. Write the estimate next to the measurement.
- How close did your child get?
- Now estimate then work out the area of each envelope.
- Were perimeters or areas easier to estimate? Why?

- You could do something similar using an old newspaper, e.g.
- Work out which page has the biggest area used for photographs.
- Choose a page and work out the total area of news stories or adverts on that page.

How much?

- While shopping, point out an item costing less than £1.
- Ask your child to work out in their head the cost of 3 items.
- Ask them to guess first.
  See how close they come.
- If you see any items labelled, for example, '2 for £3.50', ask them to work out the cost of 1 item for you, and to explain how they got the answer.

Times tables

Say together the six times table forwards, then backwards. Ask your child questions, such as:

Nine sixes?	How many sixes in 42?
Six times four?	Forty-eight divided by six?
Three multiplied by six?	Six times what equals sixty?

Repeat with the seven, eight and nine times tables.

Tables

Make a times-table grid like this.

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

- Shade in all the tables facts that your child knows, probably the 1s, 2s, 3s, 4s, 5s and 10s.
- Some facts appear twice, e.g. 7 x 3 and 3 x 7, so cross out one of each.
- Are you surprised how few facts are left?
- There might only be 10 facts to learn. So take one fact a day and make up a silly rhyme together to help your child to learn it,
  e.g. *nine sevens are sixty-three, let's have lots of chips for tea!*

Telephone challenges

- Challenge your child to find numbers in the telephone directory where the digits add up to 42.
- Find as many as possible in 10 minutes.
- On another day, see if they can beat their previous total.

Telephone: 01264 738 281

Target 1000

- Roll a dice 6 times.
- Use the six digits to make two three-digit numbers.
- Add the two numbers together.
- How close to 1000 can you get?

Car numbers

- Try reading a car number as a measurement in centimetres, then converting it to metres, e.g. 456cm, which is 4.56m, or 4m and 56cm.
- Try this with car numbers that have zeros in them, e.g. 307cm, which is 3.07m or 3m and 7cm; 370cm, which is 3.7m, or 3m and 70cm. These are harder!

Dicey subtractions

- Take turns to roll a dice twice.
- Fill in the missing boxes.

400□ - 399□

e.g. 4002 – 3994

- Count on from the smaller to the larger number, e.g *3995, 3996, 3997, 3998, 3999, 4000, 4001, 4002.*
- You counted on 8, so you score 8 points.
- Keep a running total of your score.
- The first to get 50 or more points wins.

Line it up

You need a ruler marked in centimetres and millimetres.

- Use the ruler to draw 10 different straight lines on a piece of paper.
- Ask your child to estimate the length of each line and write the estimate on the line.
- Now give them the ruler and ask them to measure each line to the nearest millimetre.
- Ask them to write the measurement next to the estimate, and work out the difference.
- A difference of 5 millimetres or less scores 10 points. A difference of 1 centimetre or less scores 5 points.
- How close to 100 points can she get?

Car numbers

- Choose a car number.
- You may add or subtract 10, 20, 30, 40, 50, 60, 70, 80 or 90.
- Try to get as close as possible to 555.
- Who can get closest during a week?

Dicey division

For this game you need a 1–100 board
(a snakes and ladders board will do),
a dice and 20 coins or counters.

- Take turns.
- Choose a two-digit number. Roll a dice. If you roll 1, roll again.
- If your two-digit number divides exactly by the dice number, put a coin on your chosen two-digit number. Otherwise, miss that turn.
- The first to get 10 counters on the board wins.

Guess my number

- Choose a number between 0 and 1 with one decimal place, e.g. 0.6.
- Challenge your child to ask you questions to guess your number. You may only answer 'Yes' or 'No'. For example, he could ask questions like 'Is it less than a half?'
- See if he can guess your number in fewer than 5 questions.
- Now let your child choose a mystery number for you to guess.
- Extend the game by choosing a number with one decimal place between 1 and 10, e.g. 3.6. You may need more questions!

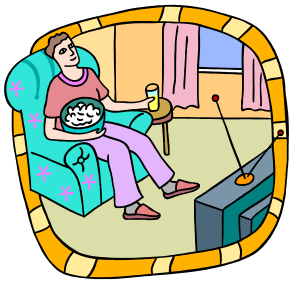
Times tables

Ask your child a different times-table fact every day,

e.g. *What is 6 times 8? Can you use this to work out 12 x 8?*

and: *What is 48 divided by 6?*

Year 6



TV addicts

Ask your child to keep a record of how long he / she watches TV each day for a week. Then ask him / her to do this.

- Work out the total watching time for the week.
- Work out the average watching time for a day (that is, the total time divided by 7).

Instead of watching TV, you could ask them to keep a record of time spent eating meals, or playing outdoors, or anything else they do each day. Then work out the daily average.

Four in a line

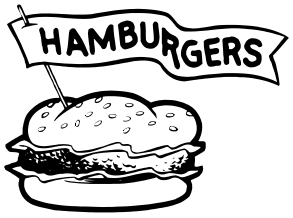
Draw a 6 x 7 grid.
Fill it with numbers under 100.

26	54	47	21	19	5	38
9	25	67	56	31	49	13
39	41	6	1	75	28	90
14	50	81	23	43	4	37
45	29	72	34	7	58	17
36	2	55	11	22	40	42

- Take turns.
- Roll three dice, or roll one dice three times.
- Use all three numbers to make a number on the grid.
- You can add, subtract, multiply or divide the numbers,
  e.g. if you roll 3, 4 and 5, you could make 3 x 4 – 5 = 7,
  54 ÷ 3 = 18, (4 + 5) x 3 = 27, and so on.
- Cover the number you make with a coin or counter.
- The first to get four of their counters in a straight line wins.

Rhymes

Make up rhymes together to help your child to remember the harder times-tables facts, e.g.
6 x 7 = 42 phew! 7 x 7 = 49 fine! 6 x 8 = 48 great!



Favourite food

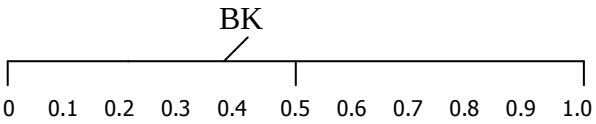
- Ask your child the cost of a favourite item of food.
- Ask them to work out what 7 of them would cost, or 8, or 9.
- How much change would there be from £50?
- Repeat with his / her least favourite food.
  What is the difference in cost between the two?

Sale of the century

- When you go shopping, or see a shop with a sale on, ask your child to work out what some items would cost with:
    - 50% off
    - 25% off
    - 10% off
    - 5% off
- Ask your child to explain how she worked it out.

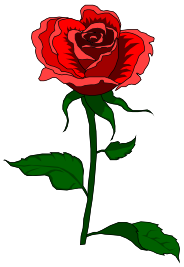
Three in a row

For this game you need a calculator.
Draw a line like this:



- Take it in turns to choose a fraction, say $^{2}/_{5}$. Use the calculator to convert it to a decimal (i.e. 2 ÷ 5 = 0.4) and mark your initials at this point on the line.
- The aim of the game is to get 3 crosses in a row without any of the other player's marks in between.
- Some fractions are harder to place than others, e.g. ninths.

Flowers



- Take turns to think of a flower.
- Use an alphabet code, A = 1, B = 2, C = 3... up to Z = 26.
- Find the numbers for the first and last letters of your flower, e.g. for a ROSE, R = 18, and E = 5.
- Multiply the two numbers together, e.g. 18 x 5 = 90.
- The person with the biggest answer scores a point.
- The winner is the first to get 5 points.

When you play again you could think of animals, or countries.

Recipes

Find a recipe for 4 people and rewrite it for 8 people, e.g.

4 people	8 people
125g flour	250g flour
50g butter	100g butter
75g sugar	150g sugar
30ml treacle	60ml treacle
1 teaspoon ginger	2 teaspoons ginger

Can you rewrite it for 3 people? Or 5 people?

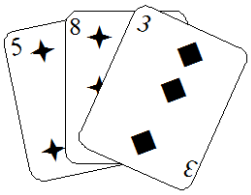
Fours

- Use exactly four 4s each time.
- You can add, subtract, multiply or divide them.
- Can you make each number from 1 to 100?
- Here are some ways of making the first two numbers.

$$1 = (4 + 4)/(4 + 4)$$
$$2 = 4/4 + 4/4$$

Card game

Use a pack of playing cards.
Take out the jacks, queens and kings.



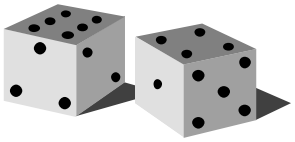
- Take turns.
- Take a card and roll a dice.
- Multiply the two numbers.
- Write down the answer. Keep a running total.
- The first to go over 301 wins!

Remainders

Draw a 6 x 6 grid like this.

82	33	60	11	73	22
65	12	74	28	93	51
37	94	57	13	66	38
19	67	76	41	75	85
86	29	68	58	20	46
50	69	30	78	59	10

- Choose the 7, 8 or 9 times table.
- Take turns.
- Roll a dice.
- Choose a number on the board, e.g. 59. Divide it by the tables number, e.g. 7. If the remainder for 59 ÷ 7 is the same as the dice number, you can cover the board number with a counter or coin.
- The first to get four of their counters in a straight line wins!



Doubles and trebles

- Roll two dice.
- Multiply the two numbers to get your score.
- Roll one of the dice again. If it is an even number, double your score. If it is an odd number, treble your score.
- Keep a running total of your score.
- The first to get over 301 wins.

Journeys

Use the chart in the front of a road atlas that tells you the distance between places.

- Find the nearest place to you.
- Ask your child to work out how long it would take to travel to some places in England if you travelled at an average of 60 miles per hour, i.e. 1 mile per minute, e.g.

  York to Preston: 90 miles 1 hour 30 minutes

  York to Dover: 280 miles 4 hours 40 minutes

Encourage your child to count in 60s to work out the answers mentally.

One million pounds

Assume you have £1 000 000 to spend or give away.
Plan with your child what to do with it, down to the last penny.

Linda Townsend 13/12/2001