Year 3 and 4 Maths at home

By the end of Year 4, most children should be able to ….

- Know fractions of whole numbers e.g. 1/5 of 55 and identify equivalent fractions e.g. 6/8 and ¾.

- Interpret mixed numbers and position them on a number line e.g.3 ½.

- Be able to identify and write the decimal equivalent of simple fractions e.g. 0.25 = ¼

- Derive and recall multiplication and division facts up to 12 x 12 and apply in problem solving situations

- Add and subtract mentally pairs of two digit whole numbers using known number facts (e.g. 47 + 58 or 91 – 35)

- Understand and use inverse operations i.e. know that it is the opposite mathematical operation. E.g. addition is the inverse of subtraction

- Develop and use written methods to record, support and explain multiplication of a 3 digit number by a 1 digit number and division of a 2 digit number by a 1 digit number including remainders.

- Know that 90 degrees is a ¼ turn

- Know that angles are measured in degrees and that one whole turn is 360 degrees. Compare and order angles less than 180 degrees.

- Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity. Know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3m or 0.6 kg)

- Answer a question by identifying what data to collect. Organise, present, analyse and interpret data in tables, diagrams and charts.

About these statements

These statements show **some** of the things your child will be able to do by the **end** of Year 4. Your child may be beyond these statements; alternatively they may be working towards them. All children learn at different paces.

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 find the correct total, you win a counter. Tell your partner how you found the total.

The first to get 10 counters wins.

Now try subtracting the smaller number from the larger one to find the difference.
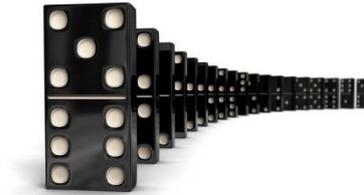
Number game 2

Put some dominoes face down

Shuffle them.

Each chooses 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.

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. 250

(Remember a number ending in 5 always round up)

Roll again, this time round three-digit numbers to the nearest 100.

Top Trumps or Match Attack cards

Use the numbers on the cards to practise reading, ordering and comparing numbers, e.g. which number is larger?

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.

Tables
Practise the all multiplication tables to 12 x 12. 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?

Play:
'times table bingo'

Child writes multiples of a given table in a 2 by 3 grid. You ask the question, e.g. What is 4 multiplied by 7?

 If they have the answer it is crossed out.

Find the product snap
Play normal snap but the first person to multiply the two cards correctly takes the cards. E.g. player one lays a 5, player two lays an 8. The first to call out 40 wins the cards. Ace can be 11.
You can play the same game but adding the numbers.

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

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

Now try the same game counting in threes, or in fives.
Can you spot which numbers will score you points? 4

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.

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 of 100

This game is for two players.

Each player draws 10 circles. Write a different two digit number in each circle, but not a tens number (10, 20 etc.)

In turn, choose one of the others player's numbers.
The other player must then say what to add to that number to make 100, e.g. choose 64, add 36.
(Add a time limit to make the game more challenging.)

If the other player is correct she crosses out the chosen number.
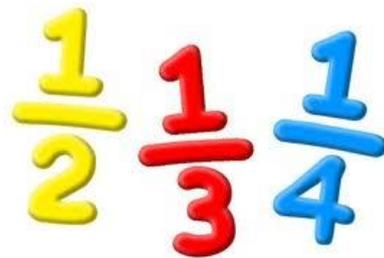
The first to cross out 6 numbers is the winner.

Fractions

Use 12 buttons or paper clips or dried beans etc….
Ask your child to find a half, quarter, third, of the given number.

Change the number and fractions appropriately e.g.15 buttons find one fifth or one third

This game can be easily extended or simplified by changing the number of buttons and the fraction.

Activities using numbers all around us

- Using car number plates – add the digits to find biggest, smallest and total.
- Sharing out sweets, toys etc in groups of 2, 3, 4, 5, 6 etc to help with times tables.
- Using telephone numbers – value of each digit.
- Using sandwiches to show fractions ½, ¼.
- Using a round sandwich cake to show fractions ½, ¼, 1/6, 1/8 etc.

Pizza please!

Your pizza costs £3.60. Cut it into six equal slices.
How much does each slice cost?

The answer is that each slice costs 60p.

- How much is half a slice?
- How much do two slices cost?
- How much does half (1/2) of the whole pizza cost?

What if you cut your pizza into four equal slices (quarters)?

- How much does one slice (1/4) cost now?
- How much does half cost now?
- Is it the same, more or less than above?

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).

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

Shopping

- Looking at prices
- Calculating change – which coins, different combinations.
- Weighing fruit and vegetables in the supermarket.
- Counting pocket money.
- Reading labels on bottles, packets, in order to discuss capacity, weight, shape and colour.
- Estimating the final bill at the end of shopping while waiting at the cash out.
- Calculating the cost of the family going to the cinema, swimming baths, etc.

Number games

- Skipping – every skip count 2, 3, 4 etc.
- Hop scotch
- Ludo
- Snakes and ladders
- Dominoes
- Cards – number sequences
- Cards – Rummy, Patience, Pontoon, Snap
- Bingo
- Yahtzee
- Darts
- Heads & Tails and keep a tally
- Chess and draughts
- Monopoly
- Computer programmes
- Beetle
- Connect 4
- Counting games to practise times tables
- I spy a number in town, on a journey
- Number jigsaws
- Clock golf, croquet, crazy golf on holiday to help counting
- Snooker and pool
- Number Lotto
- Dot to dot with numbers
- Skittles
- Happy families
- Whist
- Cribbage
- Number crosswords, dot to dot, puzzles
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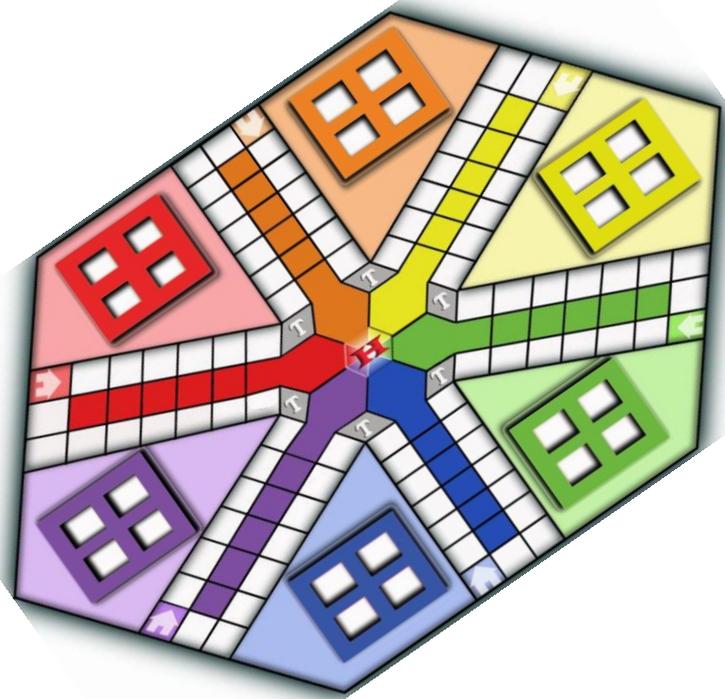
The level of mathematical challenge in a board game can be altered by introducing more dice & either adding or subtracting the numbers thrown.

There are also many maths games available on the internet which your child will enjoy playing.

Here are just a few…

http://www.coolmath.com/

http://www.bbc.co.uk/schools/websites/4_11/site/numeracy.shtml

http://www.primarygames.com/math/mathsearch/

http://www.bbc.co.uk/bitesize/ks2/maths/

http://www.mad4maths.com/

http://www.topmarks.co.uk/maths-games/7-11-years/ordering-and-sequencing-numbers

http://www.amathsdictionaryforkids.com/