

Year 5 and 6 - Maths at home

By the end of Key Stage 2, children should be able to:

- Express one quantity as a percentage of another (e.g. express £400 as a percentage of £1000); find equivalent percentages, decimals and fractions
- Calculate fractions, decimals and percentages of numbers and quantities .E.g. find 20% of £35.00
- Use their understanding of place value to multiply and divide whole and decimal numbers by 10, 100, 1000
- Use knowledge of place value and multiplication facts to 10 x 10 to derive related multiplication and division facts including decimals.
e.g. $7 \times 8 = 56$
 $56 \div 7 = 8$ etc.
 $0.8 \times 7 = 5.6$
 $5.6 \div 7 = 0.8$
- Quickly recall number bonds to 10, 20 and 100 and beyond. Transfer knowledge to decimals
e.g. if you know $4+6=10$ then you know that $0.4+0.6=1$
- Use efficient written methods to add, subtract, divide and multiply whole numbers and decimals
- Recognise when it is more effective to use mental methods of calculation. E.g. $3000-2985$ is easier to calculate by counting up than using the more traditional vertical calculation.
- Select and use standard metric units and be able to convert between units of measurement, e.g. $1200\text{g} = 1.2\text{ Kg}$

Activities to consolidate and extend your child's learning

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.

First to get over 301 wins.

Card Games

Remove face cards.

Shuffle the cards. Take it in turns to pull out two cards and multiply them together. Repeat this five times, adding up the scores. Who has scored the most?

Take two cards to make a two-digit number. Ask your child to take one card to make a single-digit number. Is this number a factor of the two-digit number or is there a remainder when you divide? Use the remainders as your score and repeat five times. What numbers give a big remainder?

Find the product snap

Play snap but the first person to calculate the product of the two cards takes the cards.
e.g. $9 \times 11 = 99$

Four in a line

Draw a 6 x 7 grid

Fill with numbers less than 100

26	54	21	19	5	38	49
9	25	67	56	31	49	13
89	50	44	17	11	9	3
77	32	68	42	16	2	99
43	1	12	85	75	81	41
3	98	79	42	15	22	7

Take turns to roll three dice. Use all three numbers to make a number on the grid. You can add, subtract, multiply or divide. e.g. if you roll 3, 4 and 5 you could make $(4 \times 5) - 3 = 17$ or $(3 \times 5) - 4 = 11$

Cover the number you make. First to cover four numbers in a straight line is the winner. You can simplify the game by making it 3 in row and a larger grid. Extend by using 4 dice or differently numbered dice.

Supermarket arrays

Look out for arrays while you are shopping in supermarkets. For example: 'There are eight cans of tomatoes next to each other and they are stacked nine cans deep – so how many cans on each layer?

What if they are also stacked two cans high – how many altogether?'



Pick a number

Pick a number, e.g. 36.

Between you, how many multiplication and division facts can you think of that involve this number? e.g. $36 \div 9 = 4$; $40 \times 9 = 360$; $36 \div 6 = 6$. Take it in turns to add a new fact. How many can you write in three minutes?

Beat the calculator

One person works out the answer to a multiplication or division question (similar to those above) with a calculator and one person works them out in their head. Who is the quicker?

Rhymes

Make up rhymes to help your child remember times tables. e.g. $6 \times 7 = 42$ phew! $7 \times 7 = 49$ fine!
 $6 \times 8 = 48$ great!

Play board games

Even a quick game of Monopoly gives numerous opportunities to practise simple numbers bond and mental calculations. Remember let the child be the banker. Can he/she calculate the change mentally?
What methods do they use?



Are you addicted to television?

Ask your child to keep a record of how much television he/she watches each day.

Work out the total watching time for the week.

What's your average watching time in a day? (mode, mean and median)

Repeat this activity for playing outdoors, reading, playing computer games etc.

Animals

Take turns to think of an animal.

Use an alphabet code, A = 1, B = 2, C = 3 up to Z = 26.

Find the numbers for the first and second letters of your animal, e.g. for a TIGER, T = 20, and I = 9,

Multiply the two numbers together, e.g. $20 \times 9 = 180$.

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 names, food, countries etc.

Get cooking

Find your favourite cupcake recipe. How many cakes does it make? e.g. 12
Can you adapt that recipe for 24 cakes, 6 cakes, 18 cakes etc.?

Shopping

When you go shopping, or see a shop with a sale on ask your child to calculate the percentage reductions.

e.g. 50% off, 20% off etc.

How did he/she work it out?

Internet

Utilise the many maths games available to help your child learn their multiplication facts and to just have fun with maths!

For example, Maths trainer has a variety of maths activities including times tables and number facts practise. Woodlands Junior provides a link to many sites which have mathematical games and activities. BBC Bitesize KS2 has many mathematical activities based around popular CBBC shows.

Here are a few more websites to try. Past SATS papers can be accessed from the first link:

<http://www.satspapers.org.uk/Page.aspx?TId=5>

<http://www.multiplication.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.math-exercises-for-kids.com/>

<http://www.mad4maths.com/>

<http://www.topmarks.co.uk/maths-games/11-14-years/number>

<http://www.amathsdictionaryforkids.com/>