Helping Your Child with Mathematics

A Booklet for Parents

Year 5

Calculation Strategies

In Year 5 your child will use the following written calculation strategies.

Addition

Vertical layout being able to contract the working to a compact efficient form:

47	368
+ 76	+ 493
123	861
1 1	1 1

Then onto larger numbers and decimals.

Subtraction

Vertical layout being able to exchange from the next column.

5 6 3	$^{4}\cancel{5}\ ^{15}\cancel{6}\ ^{1}3$
- 2 4 1	- 2 7 8
3 2 2	2 8 5

Then onto larger numbers and decimals.

Multiplication

Grid method for TOxTO 56 x 27 = (50 + 6) x (20 + 7)

x	50	6	
20	1000	120	1120
7	350	42	392
			1512

Moving onto long multiplication

	56	
x	27	
	1000	(50 x 20)
	120	(6 x 20)
	350	(50 x 7)
	42	(6 x 7)
	1512	

Then moving onto a vertical format with compact working

	56	
x	27	
	392	(56 x 7)
	1120	(56 x 20)
	1512	
	1	

<u>Division</u>

Formal written method for HTO ÷ O

560 ÷ 4

	1 40
4	$5^{1}60$

Efficiently using multiples of the divisor or 'chunking' HTO ÷ TO

560 ÷ 24

	24)	560
Approximate answer:	20	-480
550 ÷ 25 = 22		80
	3	-72
Answer 23 r 8	23	8

The following maths facts are important for your child to know. Please help them to learn them.

Doubles and halves of decimals

E.g. double 4.5 half of 9

Count backwards through zero to include negative numbers

E.g. counting back in 4's

8, 4, 0, -4, -8, -12

Addition and subtraction facts for decimal numbers that total 1

E.g. 0.3 + 0.7 = 1 1 – 0.7 = 0.3

0.22 + 0.78 = 1 1 – 0.78 = 0.22

Pairs of fractions that total 1

E.g. $\frac{3}{8}, \frac{5}{8}$ $\frac{3}{4}, \frac{1}{4}$

All the multiplication tables

x2, x3, x4, x5, x6, x7, x8, x9, x10, x 11, x12

Division facts for all the tables

E.g. 40 ÷ 5 = 8

Pairs of factors of 2 digit whole numbers

E.g. 4,3 are factors of 12

Common multiples

E.g.12 is a multiple of 3 and a multiple of 4

Square numbers

E.g. $2^2 = 4$ (2x2), $6^2 = 36$ (6x6), $10^2 = 1000$(10x10)

Cube numbers

E.g. $2^3 = 8$ (2x2x2), $5^3 = 125$ (5x5x5)

Prime numbers to 19

E.g. 2, 3, ,5, 7, 11, 13, 17, 19

Multiplying and dividing by 10, 100

When you multiply by 10 the digits move one place to the left.

When you multiply by 100 the digits move two places to the left.

When you divide by 10 the digits move one place to the right.

When you divide by 100 the digits move two places to the right

Add fractions with the same denominator and denominators that are multiples of the same number

E.g 4/8 + 3/8 = 7/8 1/5 + 3/10 = 5/10 = $\frac{1}{2}$

Fraction, decimal, percentage equivalence

E.g 1/2 = 0.5 = 50%

Shape

One whole turn is 360° or four right angles

Angles on a straight line = 180°

Angles of a triangle = 180°

A reflex angle is greater than 180° but less than 360°

An equilateral triangle has 3 equal sides and 3 equal angles

An isosceles triangle has 2 equal angles and 2 equal sides

A scalene triangle has no equal sides or angles

A right angle triangle has 1 right angle

A quadrilateral has 4 sides

Measures

1000m = 1 km 100cm = 1m 10mm=1cm

1000g = 1kg (kilogram) 1000ml = 1l (litre)

2.5 cm is approx. 1 inch 1 kg is approx. 2.2 lbs

1 litre is approx. 1.75 pints

Time

60seconds = 1 minute 60minutes = 1 hour

24 hours = 1 day 7 days = 1 week

52 weeks = 1 year 12 months = 1 year

365 days = 1 year 366 days = 1 leap year

Fun Activities to Do At Home

Decimal number plates

♦ Each choose a car number plate. **PJ46 CJM**

♦ With the two 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.

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

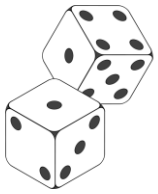
Target 1000

♦ 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?



Line it up

You need a ruler marked in cm and mm.

♦ 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 mm.

♦ Ask them to write the measurement next to the estimate, and work out the difference.

♦ A difference of 5 mm or less scores 10 points. A difference of 1 cm or less scores 5 points.

♦ How close to 100 points can they get?

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, they could ask questions like 'Is it less than a half?'

♦ See if they 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!