

Purbrook Junior School

Learning together, working together, growing together

Year 5 Maths Workshop

Wednesday 1st April 2015

Calculation: Addition and Subtraction

Welcome!

With your tea/coffee in hand, have a go at the maths warm-up below...

Magic Square

This is a magic square. The numbers in any row, column or the two diagonals have the **same total**.

23	10	17	4	11
6	18	5	12	24
19	1	13	25	7
2	16	21	8	20
15	22	9	16	3

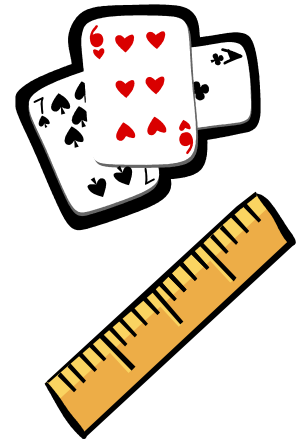
Unfortunately something is wrong.

One of the numbers is incorrect.

Which number is it? What should it be?



Fun Addition & Subtraction



Maths Games and Activities (Addition & Subtraction)

Telephone challenges

Challenge your child to find numbers in the telephone directory where the digits add up to 42 (for example **01264 738 281**) Find as many as possible in 10 minutes. On another day, see if they can beat their previous total.

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?

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. This game could be easily adapted to practise adding to other totals (e.g.: adding to 1000, adding 2x decimal numbers to make a whole number, adding cm measurements to make 1m, adding money to £10, etc).

Four in a line

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

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 $3 \times 4 - 5 = 7$,

$54 \div 3 = 18$, $(4 + 5) \times 3 = 27$, 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.

Shopping fun

The activity of shopping provides numerous opportunities for calculation. Whilst out shopping, browsing shopping catalogues or online shopping websites (with supervision!) why not challenge your

Target

Skill to be learnt: To add or subtract mentally a set of one and two-digit numbers.

What you will need: 0 - 9 number cards, timer

How to play: Lay out number cards face down. Choose a target number e.g 15. Reveal 4 cards. Both players then compete to get as close to the agreed target using each of the digits once and addition or subtraction. The player who is closest to the target scores 2 points, equal closest scores 1 point each. First to 10 points wins. Use informal jottings if children struggle to work entirely mentally. Discuss strategies to help when adding e.g. count on from the largest number, look for any pairs that total 10 first etc.

Add or Take

Skill to be learnt: To add or subtract mentally a set of one and two-digit numbers.

What you will need: 1 - 100 grid, 0 - 9 spinner, counters

How to play: Players take turns to spin the spinner 4 times to generate two 2 digit numbers. They then choose to add or subtract the numbers and cover the answer on the grid. (Addition answers are often not on the grid which forces more subtraction!). First to cover 3 in a line wins.

Make 100

Skill to be learnt: To recall all pairs of numbers which total 100

What you will need: 0 - 100 cards

How to play: Against the timer players reveal cards and have to say the number that would be needed to total 100. How many cards can you reveal in 2 minutes? To help your child work out the complements to make 100 draw comparisons with pairs to 10 e.g. you know that $9 + 1 = 10$ so you can use this to help you work out that $90 + 10 = 100$. Use strategies such as counting on to the next 10 before counting in tens to 100.

Quick Add

This is a game for two players with three dice.

Each of you should draw a grid like this.

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Take turns to roll all three dice. Write the total score on your own grid. When the grids are full, keep rolling. This time, if the total score is on either player's grid, cross it out. The winner is the first player to get all their numbers crossed out.



Useful Maths



General Maths Websites

<http://www.woodlands-junior.kent.sch.uk/maths/>

<http://www.bbc.co.uk/education/subjects/z826n39>

<http://www.coolmath4kids.com/>

<http://www.maths-games.org/>

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

<http://www.active-maths.co.uk/index.html>

<http://www.primaryresources.co.uk/maths/mathsC1.htm>

Maths Challenges and Investigations

<http://www.figurethis.org>

This is a website created by the NCTM (The National Council of Teachers of Mathematics). It contains a family corner which lists resources to help families work along their children. It also contains a maths challenge index in which it lists a range of challenges that can be downloaded and printed.

www.mathschallenge.net

This website has a range of mathematical challenges which are labelled by difficulty. As well as including the problem it also includes solutions as well. More suited for upper school mathematicians.

<http://www.beam.co.uk/mathsofthemoth.php>

Maths of the Month provides a selection of exciting resources you can download and use for free. They include challenging problems and puzzles, open-ended investigations, cross-curricular activities, and resources to practise and consolidate children's pure mathematical understanding. The problems are clearly sorted into age ability and it covers the full primary age range and beyond.

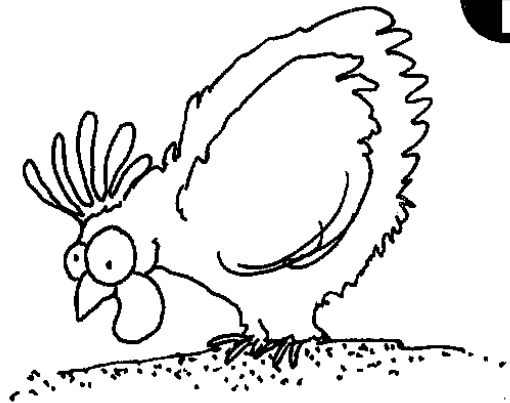
Number Problems

Problem 22

Numbers 123

Level
B

A farmer has three different hen houses. One hen house contains red hens, the second black hens and the third white hens. Every day the red hens lay five eggs, the black hens lay eight eggs and the white hens lay three eggs. How many days will it take for the hens to lay a total of 80 eggs?

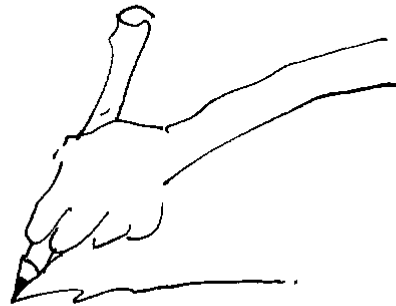
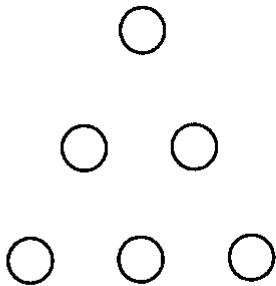


Problem 54

Numbers 123

Level
A

Complete the following triangle using the numbers 1-6. Each side must add up to 12.



Problem 56

Numbers 123

Level
B

Find at least three different ways to score 101 by adding four of the following numbers: 50, 30, 27, 25, 20, 19, 16, 15 and 7.



100 Square

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