Jungle,
Rainbow and
Planet Maths

Developing fluency in mathematics

The national curriculum for mathematics aims to ensure that all pupils:

- ***become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately***
- *reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language, can solve problems by applying their mathematics to a variety of routine and non- routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions*

<u>Fluency is one of the overarching aims of the new mathematics curriculum 2014, but what does fluency mean?</u>

Fluency isn't halting or stumbling: to be fluent is to flow quickly and accurately. It means more or less the same as when someone is said to be fluent in a foreign language.

Pupils do not become fluent overnight. Fluency is not something that can happen all at once; fluency develops over time, through effective teaching, deep understanding, repetition and practice of basic skills.

Paul Spencer (Headteacher) and Elaine Hobson (Deputy Headteacher) at Staincliffe Junior School created Rainbow Maths seven years ago.

Rainbow Maths was developed to motivate children and support and strengthen the pupil's knowledge of the basic mathematical skills, to raise the profile of mathematics in school and to identify where children needed intervention.

The school saw immediate benefits to introducing the package as children's engagement and enjoyment in the subject was clear in lessons. Paul and Elaine have credited Rainbow Maths for the increased rates of progression in their school. For the last three years progression has been above the local and national average.

They commented that: "Pupils like the skills sheets, they like the recognition in assemblies, and maths has become one of the well like subjects in school as nearly all children achieve success at their level".

How does it work?

Rainbow Maths covers the following objectives:

I know my Number bonds to 10 **I know my Addition and subtraction facts to 5** **I can count forwards and backwards in 2s to 20** **I can count forwards and backwards in 5s to 50** **I can count forwards and backwards in 10s to 100** **I can double and halve all numbers to 10**
I can halve all even numbers to 20 **I know my number bonds to 20** **I know my Addition and subtraction facts to 10** **I can double all numbers to 1 to 15** **I can halve all even numbers to 20** **I know my 2, 5 and 10 times tables** **I know pairs of multiples of 10 that total 100**
I know halves of multiples of 10 up to 100 **I can double all numbers to 1 to 20** **I know my 2, 3, 4, 5 and 10 times tables and corresponding division facts** **I know pairs of multiples of 5 that total 100** **I know my addition and subtraction facts to 20**
I know my 2,3, 4, 5, 6 and 10 times tables and corresponding division facts **I know my number bonds to 100** **I know doubles of numbers to 50** **I can find 50% of numbers to 100**
I know my 2,3, 4, 5, 6, 8 and 10 times tables and corresponding division facts **I can double any two digit numbers** **I can double multiples of 10 to 1000** **I can find quarters of even numbers to 100** **I can find 25% of even numbers to 100**
I know all my tables to 10 times 10 and corresponding division facts **I know the doubles of multiples of 100 to 10,000 and the corresponding halves** **I can double and halve numbers to 100 including decimals to one decimal place** **I can find 10% of any number to 100**
I can multiply a decimal fraction (one decimal place) by a single digit number To know square numbers to 12 times 12 **I can double and halve decimals to two decimal places (e.g. half of 5.6, double 0.34)** **I can use knowledge of multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)**

Year 3 children begin on the Red challenge.
Year 4 children begin on the Orange challenge
Year 5 children on the Green challenge
Year 6 children on the Blue challenge

There are two different sheets for each colour, this allows children sitting next to each other (on the same colour) to be given different sheets. The different sheets are not intended to be done on a rotation basis, a child can receive sheet 'a' or sheet 'b' at any point.

The children are given 6 minutes to complete each colour. At the end of the 6 minutes the sheets are collected in. Only children that have completed the entire sheet will have it marked. As soon as the child makes 2 mistakes on red, orange and yellow or 1 mistake on green, blue, indigo and violet, the teacher/TA stops marking and the child is informed that they will remain on the same colour next week. When a child has completed the sheet successfully on two successive occasions they progress onto the next colour. When a child progresses onto the next colour their success is celebrated in an assembly and the children are awarded the relevant certificate. On achieving violet they are also awarded a Rainbow Maths sticker.

If children do not progress onto the next colour they retry the same sheet the following week. Early work, homework or intervention can be put in place to support children who are not making sufficient progress over time.

The programme is designed to allow pupils to progress at their own speed, with children at a variety of levels completing the programme at the same time in each class. It is not expected that each child will move onto the next colour on a weekly, monthly or set period of time.

One of the key elements of Rainbow Maths is that children are encouraged to take responsibility for their own learning, practicing key skills and learning number facts in their own time.

It does not matter if children know what questions will appear on the sheet next week, as this programme's purpose is to support fluency. If the child knows that a question will be on the test next week they will try to remember the question and answer, thus achieving the intended outcome.

Parents can be made aware of the objectives for each colour to assist children with learning the basic skills needed to achieve at that colour. For a small number of pupils, Rainbow Maths (red level) may be too complicated and for others a greater challenge may be needed.

Jungle Maths

Jungle Maths can be used with KS1 children or with KS2 children who are not able to access Rainbow Maths. Jungle Maths is conducted in the same way as Rainbow Maths. Children should be given 6 minutes to complete the Jungle Maths sheet. It is marked in the same way as Rainbow Maths, children progress to the next level when they have completed the entire sheet with less than 3 errors.

Zebra 1		Counting to 10 Subtraction U – U and T – U
2		Addition to 10

Zebra		Subtraction T – U (problem solving)
Lion 3		Sequences Addition to 10 (Problem Solving)
Lion 4	    	Addition to 10 2 Times Table Doubling
Monkey 5		2 times table 3 times table Addition to 20 T +U U+U Subtraction to 20 T-U U-U
Monkey 6		3 times table Dividing by three Doubling Halving

Planet Maths

This package is intended to stretch the more able mathematicians once they have completed the Rainbow Maths programme.

Planet Maths gives a good grounding in the basic skills required for end of ks2 and early ks3 maths. Children should be given 7 minutes to complete each Planet Maths sheet. It is marked in the same way as Rainbow Maths, children progress to the next level when they have completed the entire sheet with no errors.

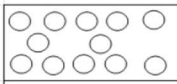
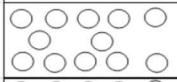
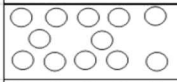
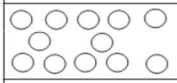
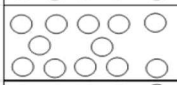
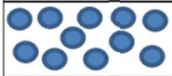
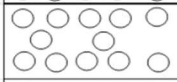
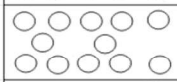
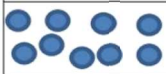
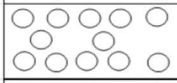
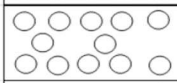
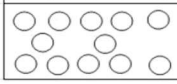
Mercury	Sequences 4 operations Fractions Rounding
Venus	Adding decimals 4 operations Fractions of an amount Converting fractions to percentages
Earth	Double and having Time Word problem solving Greater than and less than
Mars	Subtraction Greater than and less than Problem solving BODMAS
Jupiter	Directed number Powers of ten Factors 10 % increase
Saturn	Multiplying decimals by 10 Dividing decimals by 10 Simplifying ratios Ratios of an amount
Uranus	Multiplying decimals and integers by 100 Probability Substitution in expressions Pot luck
Neptune	Midpoint of two numbers Metric conversations Percentage of an amount Simplifying fractions

Jungle Maths

Zebra

Name:

A

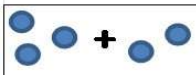
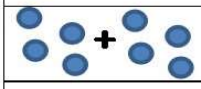
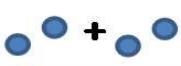
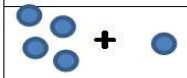
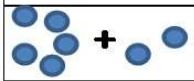
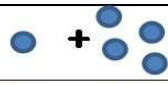
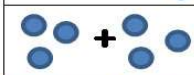
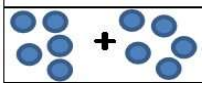
How Many?	Counting	Take Away	Take Away
	 Colour in 4	10 - 3 =	9 - 3 =
	 Colour in 6	6 - 4 =	8 - 4 =
	 Colour in 3	5 - 1 =	5 - 4 =
	 Colour in 7	8 - 5 =	7 - 1 =
	 Colour in 10	9 - 5 =	10 - 5 =
	 Colour in 5	7 - 2 =	4 - 3 =
	 Colour in 2	8 - 2 =	6 - 0 =
	 Colour in 1	4 - 1 =	3 - 2 =
	 Colour in 12	2 - 0 =	9 - 5 =
	 Colour in 9	6 - 6 =	2 - 0 =

Jungle Maths

Zebra

Name:

B

Add	Add	Take Away	Take Away
 =	3 + 4 =	 - 5 = 2	5 - 3 =
 =	8 + 1 =	 - 3 = 1	6 - 4 =
 =	7 + 2 =	 - 2 = 7	7 - 4 =
 =	4 + 2 =	 - 7 = 0	7 - 6 =
 =	5 + 5 =	 - 5 = 4	12 - 5 =
 =	3 + 9 =	 - 2 = 4	3 - 3 =
 =	6 + 3 =	 - 4 = 1	8 - 0 =
 =	2 + 2 =	 - 1 = 6	4 - 3 =
 =	5 + 2 =	 - 0 = 8	12 - 10 =
 =	10 + 0 =	- 8 = 2	7 - 0 =

Jungle Maths

Lion

Name:

A

Counting: What's next?	Counting: What's next?	Sequences	Missing Number
22, 23, 24, ____, ____	43, 42, 41, ____, ____	2, 4, 6, ____, ____	3 + ☐ = 5
39, 40, 41, ____, ____	23, 22, 21, ____, ____	3, ____, 9, ____, 15	4 + ☐ = 5
9, 10, 11, ____, ____	55, 54, 53, ____, ____	5, 10, ____, 20, ____	2 + ☐ = 5
60, 61, 62, ____, ____	19, 18, 17, ____, ____	10, 8, ____, ____, 2	5 + ☐ = 5
45, 46, 47, ____, ____	63, 62, 61, ____, ____	10, ____, 30, ____, 50	1 + ☐ = 5
89, 90, 91, ____, ____	37, 36, 35, ____, ____	4, 8, 12, ____, ____	0 + ☐ = 5
7, 8, 9, ____, ____	5, 4, 3, ____, ____	14, 16, 18, ____, ____	5 = 2 + ☐
53, 54, 55, ____, ____	100, ____, 98, ____	8, 7, ___, ___, 4, ___	5 = 1 + ☐
67, 68, 69, ____, ____	75, 74, 73, ____, ____	1, 3, 5, ___, ___, ___	5 = 5 + ☐
96, 97, 98, ____, ____	88, 87, 86, ____, ____	10, 8, ___, ___, 2, ___	5 = 3 + ☐

Jungle Maths

Lion

Name:

B

Missing Number	2 x Table	2 x Facts	Doubles
5 + ☐ = 7	2 x 2 =	18 = ☐ x 2	Double 4 =
4 + ☐ = 7	5 x 2 =	12 = ☐ x 2	Double 5 =
1 + ☐ = 7	2 x 7 =	8 = ☐ x 2	Double 7 =
0 + ☐ = 7	2 x 4 =	14 = ☐ x 2	Double 2 =
☐ + 3 = 7	2 x 0 =	4 = ☐ x 2	Double 9 =
☐ + 6 = 7	9 x 2 =	☐ x 2 = 20	Double 1 =
☐ + 7 = 7	2 x 10 =	☐ x 2 = 16	Double 6 =
☐ + 2 = 7	8 x 2 =	☐ x 2 = 0	Double 8 =
7 = ☐ + ☐	2 x 3 =	☐ x 2 = 6	Double 10 =
☐ + ☐ + ☐ = 7	1 x 2 =	☐ x 2 = 10	Double 3 =

Jungle Maths

Name:

Monkey

A

2 x table	3 x table	Add	Take Away
★★ ★★ x 2 =	3 x 3 =	9 + 5 =	9 - 2=
★★★ ★★★ x 2 =	3 x 4 =	7 + ☐ = 10	10 - ☐ = 7
★ ★ x 2 =	2 x 3 =	6 + ☐ = 12	8 - 5 =
★★ ★ x 2 =	5 x 3 =	9 + 5 =	7 - ☐ = 3
★★★ ★★ x 2 =	3 x 0 =	☐ + 8 = 18	12 - 10 =
★★★★ ★★★★ x 2 =	3 x 6 =	7 + 2 =	7 - ☐ = 7
★ x 2 =	3 x 10 =	12 + ☐ = 13	6 - 1 =
★★★★ ★★ x 2 =	3 x 5 =	7 + 5 =	8 - 2 =
★★★★ ★★★★★ x 2 =	3 x 1 =	9 + ☐ = 13	20 - ☐ =20
★★★★★ ★★★★★ x 2 =	8 x 3 =	☐ + 5 = 10	☐ - 4 = 8

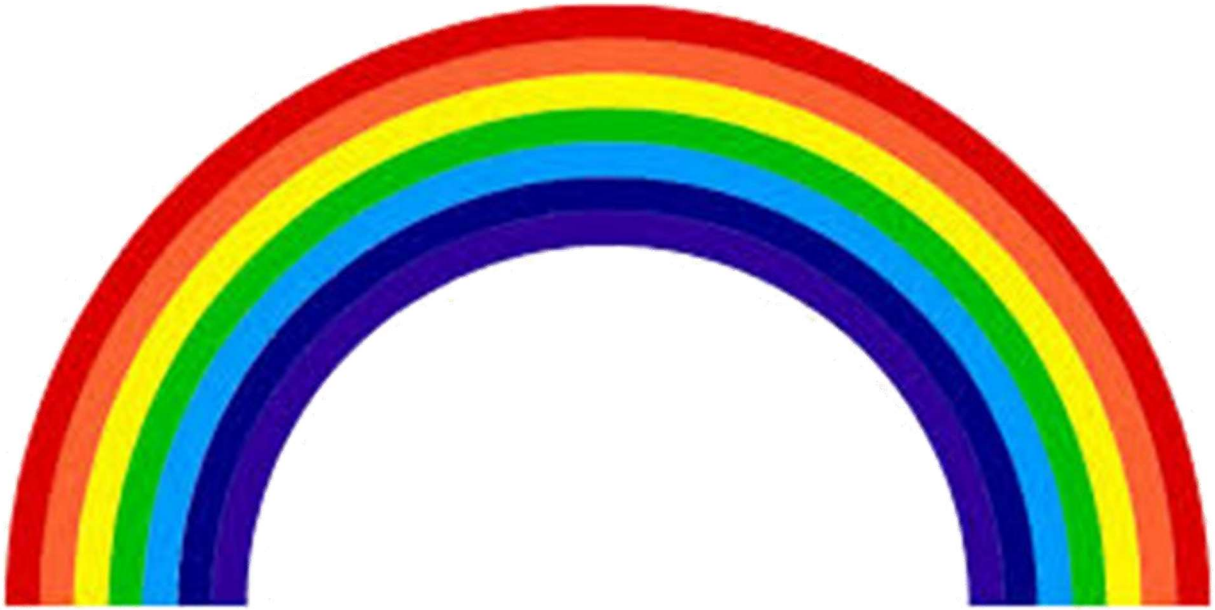
Jungle Maths

Name:

Monkey

B

3 x table	How many sets of 3 in...?	Double	Half
☐ x 3 = 15	12 ÷ 3 =	5 + 5 =	Half of 10 =
6 x 3 =	6 ÷ 3 =	7 + 7 =	Half of 6 =
☐ x 3 = 9	18 ÷ 3 =	6 + 6 =	Half of 12 =
3 x ☐ = 0	9 ÷ 3 =	9 + 9 =	Half of 8 =
3 x 2 =	15 ÷ 3 =	10 + 10 =	Half of 2 =
3 x 9 =	21 ÷ 3 =	2 + 2 =	Half of 4 =
10 x ☐ = 30	30 ÷ 3 =	8 + 8 =	Half of 20 =
3 x 7 =	27 ÷ 3 =	4 + 4 =	Half of 0 =
1 x 3 =	3 ÷ 3 =	3 + 3 =	Half of 14 =
3 x ☐ = 27	24 ÷ 3 =	11 + 11 =	Half of 16 =



Hampton Hill Rainbow Maths

Rainbow Maths

Red A

Name:

I can count forwards and backwards in 2s to 20, 5s to 50, 10s to 100
I know my Number bonds to 10

8 x 2 =	12 ÷ 2 =	2, 4, ____, 10	4 + 6 =
2 x 4 =	6 ÷ 2 =	5, 10, _____, 20	2 + 3 =
1 x 2 =	2 ÷ 2 =	25, 30, 35, _____	2 + 8 =
10 x 2 =	2 x 7 =	10, 20, 30, _____	9 + ____ = 10
2 x 1 =	2 x 9 =	40, 50, _____, 70	6 = 2 + _____
6 x 2 =	2 x 5 =	90, 80, 70, _____	7 + 1 =
2 x 9 =	14 ÷ 2 =	70, 60, 50, _____	2 + 1 =
2 x 2 =	2 x 8 =	30, 35, 40, _____	5 + ____ = 10
2 x 10 =	20 ÷ 2 =	8, 10 _____, 14	5 + 3 =
2 x 5 =	10 x 2 =	20, 18, 16, _____	10 - 7 =
2 x 3 =	18 ÷ 2 =	12, 14, _____, 18	4 + ____ = 6
7 x 2 =	16 ÷ 2 =	50, 45, 40, 35, ____	10 - 1 =

Rainbow Maths

Red B

Name:

I can count forwards and backwards in 2s to 20, 5s to 50, 10s to 100
I know my Number bonds to 10

2 x 2 =	2 x 9 =	2, 4, ____, 8, 10	3 + 7 =
2 x 10 =	2 x 5 =	5, 10 _____, 20	1 + ____ = 10
2 x 5 =	14 ÷ 2 =	25, 30, 35, _____	2 + 8 =
2 x 3 =	2 x 8 =	30, 40, 50, _____	_____ + 1 = 10
7 x 2 =	2 ÷ 2 =	40, 50, ____, 70	6 = 4 + _____
8 x 2 =	2 x 7 =	90, 80, 70, _____	10 - 7 =
2 x 4 =	20 ÷ 2 =	20, 30, 40, _____	5 + 5 =
1 x 2 =	10 x 2 =	40, 45, 50, _____	2 + ____ = 10
10 x 2 =	12 ÷ 2 =	8, 10, _____, 14	10 = ____ + 3
1 x 2 =	6 ÷ 2 =	18, 16, 14, _____	10 - 9 =
6 x 2 =	18 ÷ 2 =	12, 14, _____, 18	4 + _____ = 10
2 x 9 =	16 ÷ 2 =	50, 45, 40,35, ____	10 - 1 =

Rainbow Maths

Orange A

Name:

I know my 2, 5 and 10 times tables

2 x 4 =	18 = 2 x ____	6 + 4 =	4 + 3 =
3 x 2 =	_____ x 2 = 20	8 – 4 =	2 + 8 =
5 x 3 =	5 x 5 =	4 + 4 =	9 + 8 =
10 x 7 =	1 x 2 =	6 + 6 =	8 – 7 =
0 x 5 =	5 x _____ = 40	10 = 4 + _____	3 + 5 =
6 x 5 =	6 x 5 =	4 = _____ + 3	7 + 4 =
10 x 9 =	35 + _____ x 5	7 – 3 =	2 + 5 =
2 x 6 =	10 x 8 =	6 – 5 =	9 – 8 =
6 x 10 =	100 = _____ x 10	8 + 8 =	9 – 6 =
4 x 5 =	4 x 2 =	5 + 5 =	8 – 3 =
10 x 3 =	2 x 5 =	3 – 3 =	5 – 2 =
7 x 2 =	8 x 2 =	9 – 7 =	8 + 5 =

Rainbow Maths

Orange B

Name:

I know my 2, 5 and 10 times tables
I can add any 2 single digit numbers mentally.

6 x 10 =	18 = 9 x _____	7 + 3 =	4 + 3 =
4 x 5 =	_____ x 10 = 100	8 - 4 =	2 + 8 =
10 x 3 =	5 x 5 =	3 + 3 =	9 + 8 =
7 x 2 =	2 x 1 =	6 + 6 =	8 - _____ = 1
5 x 6 =	5 x _____ = 40	10 = 4 + _____	3 + 5 =
2 x 4 =	6 x 5 =	4 = _____ + 3	7 + 4 =
3 x 2 =	35 = _____ x 5	7 - 3 =	_____ + 5 = 7
5 x 3 =	10 x 8 =	6 - 5 =	9 - 8 =
10 x 7 =	20 = _____ x 10	9 + 9 =	9 - 6 =
0 x 5 =	4 x 2 =	7 + 7 =	8 - 3 =
10 x 9 =	5 x 2 =	3 - 3 =	5 - 2 =
2 x 6 =	8 x 2 =	9 - 7 =	8 + 5 =

Rainbow Maths

Yellow A

Name:

I know my 2, 3, 4, 5 and 10 timestables
I know my number bonds to 20

6 x 4 =	21 = 3 x ____	12 + _____ = 20	20 = 16 + _____
2 x 4 =	_____ x 10 = 30	17 - 4 =	_____ + 19 = 20
3 x 2 =	3 x 3 =	3 + 13 =	9 + 8 =
5 x 9 =	4 x 1 =	_____ + 15 = 20	17 - 9 =
8 x 4 =	5 x ____ = 35	20 - 13 =	3 + 15 =
4 x 4 =	7 x 4 =	14 = ____ + 7	11 + 4 =
3 x 4 =	27 = _____ x 3	17 - 3 =	4 + 9 =
5 x 5 =	10 x 10 =	16 - 4 =	19 - 2 =
10 x 3 =	20 + _____ x 10	8 + 9 =	18 - 14 =
7 x 2 =	4 x 9 =	7 + 7 =	11 - 3 =
0 x 3 =	3 x 8 =	6 + 7 =	15 - 9 =
10 x 7 =	_____ x 2 = 16	19 - 5 =	8 + 15 =
2 x 6 =	5 x 3 =	17 + _____ = 20	14 + _____ = 20

Rainbow Maths

Yellow B

Name:

I know my 2, 3, 4, 5 and 10 times tables
I know my number bonds to 20

3 x 4 =	18 = 3 X _____	17 + _____ = 20	20 = 4 + _____
5 x 5 =	_____ x 10 = 100	18 - 4 =	_____ + 18 = 20
10 x 3 =	3 x 3 =	3 + 13 =	9 + 8 =
7 x 2 =	4 x 1 =	1 + _____ = 19	_____ - 8 = 1
6 x 4 =	5 x _____ = 35	20 - 11 =	3 + 15 =
2 x 4 =	_____ = 7 x 4	14 = _____ + 7	11 + 4 =
3 x 2 =	21 = _____ x 3	17 - 3 =	0 + 5 =
5 x 9 =	10 x 3 =	16 - 5 =	19 - 12 =
8 x 4 =	20 = _____ x 10	9 + 9 =	18 - 14 =
0 x 3 =	4 x 9 =	7 + 7 =	11 - 3 =
10 x 7 =	3 x _____ = 24	6 + 7 =	15 - 12 =
2 x 6 =	8 x 2 =	19 - 5 =	8 + 15 =
10 x 0 =	5 x 3 =	14 + _____ = 20	13 + _____ = 20

Rainbow Maths

Green A

Name:

I know my 2, 3, 4, 5, 6 and 10 times tables and division facts
I can add or subtract a single digit number to or from a 2 digit number

8 x 3 =	36 = _____ x 6	16 ÷ 4 =	24 + 6 =
3 x 4 =	6 x 2 =	28 ÷ 4 =	72 + 3 =
5 x 3 =	4 x 4 =	42 ÷ 6 =	29 + 8 =
10 x 4 =	6 x 7 =	60 ÷ 6 =	91 - 7 =
0 x 4 =	4 x 9 =	25 ÷ 5 =	63 + 5 =
6 x 4 =	6 x 5 =	30 = _____ x 6	17 + 4 =
3 x 9 =	14 ÷ 2 =	48 ÷ 6 =	24 + 5 =
4 x 8 =	3 x 8 =	40 ÷ 5 =	55 - 8 =
6 x 10 =	28 = _____ x 4	18 = _____ x 3	42 - 6 =
4 x 5 =	9 x 6 =	20 = _____ x 5	18 + 7 =
6 x 3 =	8 x 6 =	32 ÷ 4 =	35 - 3 =
7 x 3 =	16 ÷ 2 =	24 ÷ 4 =	38 + 5 =
5 x 7 =	15 ÷ 3 =	20 = 2 x _____	14 + _____ = 20

Rainbow Maths

Green B

Name:

I know my 2, 3, 4, 5, 6 and 10 times tables and division facts
I can add or subtract a single digit number to or from a 2 digit number

8 x 4 =	18 ÷ 6 =	16 ÷ 4 =	24 + 3 =
3 x 3 =	6 x 2 =	28 ÷ 4 =	62 + 8 =
5 x 3 =	5 x 5 =	42 ÷ 6 =	19 + 8 =
10 x 6 =	6 x 7 =	60 ÷ 6 =	81 – 7 =
0 x 4 =	4 x 9 =	25 ÷ 5 =	63 + 5 =
6 x 4 =	6 x 5 =	54 = _____ x 6	17 + 4 =
3 x 9 =	36 = _____ x 6	48 ÷ 6 =	27 + 5 =
4 x 6 =	3 x 8 =	40 ÷ 5 =	55 – 8 =
6 x 10 =	28 = _____ x 4	18 = _____ x 3	49 – 6 =
4 x 5 =	9 x 6 =	20 = _____ x 5	18 + 7 =
6 x 3 =	8 x 6 =	32 ÷ 4 =	35 – 3 =
7 x 3 =	16 ÷ 2 =	24 ÷ 4 =	58 + 5 =
5 x 7 =	15 ÷ 3 =	20 = 2 x _____	74 + 9=

Rainbow Maths

Blue A

Name:

I know my 2,3, 4, 5, 6, 9 and 10 times tables and division facts
I know my number bonds to 100

6 x 3 =	18 ÷ 6 =	72 ÷ 9 =	26 = _____ = 100
9 x 5 =	8 x 9 =	24 ÷ 6 =	100 – 74 =
6 x 9 =	5 x 5 =	42 ÷ 6 =	19 + _____ = 40
3 x 8 =	4 x 4 =	18 ÷ 2 =	81 + _____ = 100
6 x 6 =	9 x 9 =	45 ÷ 5 =	100 – 25 =
8 x 6 =	4 x 9 =	54 = _____ x 9	100 – 6 =
3 x 4 =	36 = _____ x 6	40 = _____ x 8	35 + _____ = 100
5 x 3 =	3 x 2 =	10^2 =	51 + _____ = 100
4 x 6 =	27 = _____ x 3	35 = _____ x 5	100 = 47 + _____
0 x 3 =	9 x 4 =	_____ = 4 x 5	100 = _____ + 21
9 x 9 =	5 x 6 =	32 ÷ 4 =	100 – _____ = 19
3 x 9 =	16 ÷ 2 =	5^2 =	100 – _____ = 12
7 x 6 =	36 ÷ 9 =	5 x 3 x _____ = 30	85 + _____ = 100
10 x 3 =	54 ÷ 6 =	2 x 5 x 4 =	100 – _____ = 62

Blue B

Rainbow Maths

Blue B

Name:

I know my 2,3, 4, 5, 6, 9 and 10 times tables and division facts
I know my number bonds to 100

8 x 3 =	9 x 4 =	32 ÷ 4 =	36 + _____ = 100
3 x 4 =	5 x 6 =	4^2 =	100 -64 =
5 x 3 =	16 ÷ 2 =	42 ÷ 6 =	29 + _____ = 100
10 x 4 =	4 x 4 =	18 ÷ 2 =	82 + _____ = 100
0 x 4 =	9 x 9 =	45 ÷ 5 =	100 - 15 =
6 x 4 =	4 x 9 =	54 = _____ x 9	100 - 9 =
3 x 9 =	36 = _____ x 6	40 = _____ x 8	25 + _____ = 100
4 x 8 =	3 x 2 =	3^2 =	53 + _____ = 100
6 x 10 =	27 = _____ x 3	35 = _____ x 5	100 = 33 + _____
4 x 5 =	25 = 5 x _____	_____ = 4 x 5	100 = _____ + 11
6 x 3 =	8 x 4 =	72 ÷ 9 =	100 - _____ = 27
7 x 3 =	7 x _____ = 21	24 ÷ _____ = 4	100 - _____ = 13
7 x 6 =	63 ÷ 7 =	5 x 3 x _____ = 30	87 + _____ = 100
10 x 3 =	45 ÷ 9 =	2 x 5 x 4 =	100 - _____ = 4

Rainbow Maths

Indigo A

Name:

I know my 2,3, 4, 5, 6, 8, 9 and 10 times tables and division facts
I can double or halve any two digit number

8 x 6 =	64 ÷ 8 =	2 x 3 x 6 =	27 + 27 =
3 x 7 =	8 x 9 =	56 ÷ 7 =	62 + 62 =
5 x 3 =	2 x 2 x 6 =	42 ÷ 6 =	19 + 19 =
4 x 6 =	4 x 9 =	32 ÷ 8 =	81 – 37 =
0 x 7 =	7 x 9 =	45 ÷ 5 =	44 ÷ 2 =
8 x 8 =	4 x 8 =	54 = _____ x 6	17 + 17 =
3 x 9 =	56 = _____ x 7	48 = _____ x 6	43 + 43 =
7 x 6 =	3 x 9 =	8^2 =	68 ÷ 2 =
6 x 3 =	28 = _____ x 4	27 = _____ x 3	45 ÷ 2 =
9 x 5 =	9 x 4 =	_____ = 7 x 5	57 + 57 =
6 x 9 =	5 x 5 x 2 =	32 ÷ 4 =	35 + 35 =
7 x 8 =	14 ÷ 2 =	9^2 =	78 ÷ 2 =
6 x 6 =	28 ÷ 7 =	6 x 25 =	36 + 36 =
5 x 7 =	54 ÷ 9 =	3 x 3 x 4 =	56 ÷ 2 =

Rainbow Maths

Indigo B

Name:

I know my 2,3, 4, 5, 6, 8, 9 and 10 times tables and division facts
I can double or halve any two digit number

$2 \times 3 \times 4 =$	$56 \div 8 =$	$2 \times 3 \times 6 =$	$27 + 27 =$
$3 \times 2 \times 7 =$	$8 \times 9 =$	$56 \div 7 =$	$79 \div 2 =$
$5 \times 3 =$	$2 \times 2 \times 6 =$	$42 \div 6 =$	$17 + 17 =$
$4 \times 6 =$	$4 \times 9 =$	$32 \div 8 =$	$81 + 81 =$
$0 \times 1 \times 6 =$	$7 \times 9 =$	$45 \div 5 =$	$44 \div 2 =$
$8 \times 8 =$	$4 \times 8 =$	$54 =$ _____ $\times 6$	$36 \times 2 =$
$3 \times 3 \times 3 =$	$49 =$ _____ $\times 7$	$48 =$ _____ $\times 8$	$63 \times 2 =$
$7 \times 6 =$	$3 \times 9 =$	$8^2 =$	$68 \div 2 =$
$6 \times 3 =$	$28 =$ _____ $\times 4$	$27 =$ _____ $\times 3$	$75 \div 2 =$
$9 \times 5 =$	$9 \times 4 =$	_____ $= 7 \times 5$	$57 + 57 =$
$6 \times 9 =$	$4 \times 4 \times 2 =$	$32 \div 4 =$	$75 \times 2 =$
$7 \times 8 =$	$24 \div 2 =$	$9^2 =$	$59 \div 2 =$
$6 \times 6 =$	$3 \times 3 \times 3 =$	$6 \times 25 =$	$96 + 96 =$
$5 \times 7 =$	$3^2 =$	$3 \times 3 \times 4 =$	$56 \div 2 =$

Rainbow Maths

Violet A

Name:

I know all my tables to 10 times 10 and division facts
I can add and subtract 2 digit numbers including decimals to 1 d.p.

6 x 3 =	18 ÷ 6 =	72 ÷ 9 =	2.7 + 2.6 =
9 x 5 =	8 x 9 =	56 ÷ 7 =	62. 7 + 0.8 =
6 x 9 =	5 x 5 =	42 ÷ 6 =	1.9 + 1.8 =
7 x 8 =	4 x 7 =	32 ÷ 8 =	81 – 37 =
6 x 6 =	9 x 9 =	45 ÷ 5 =	27.6 + 25 =
8 x 6 =	4 x 8 =	54 = _____ x 9	15 + 2.6 =
3 x 7 =	36 = _____ x 6	40 = _____ x 8	2.7 + 1.5 =
5 x 3 =	3 x 8 =	7^2 =	5.1 – 1.8 =
4 x 6 =	28 = _____ x 4	27 = _____ x 3	47 + 76 =
0 x 7 =	9 x 4 =	_____ = 7 x 5	57 + 28 =
7 x 7 =	5 x 8 =	32 ÷ 4 =	13.5 – 2.3 =
1 x 3 x 9 =	16 ÷ 2 =	5^2 =	58 + 15 =
7 x 6 =	48 ÷ 6 =	5 x 25 =	57 – 36 =
10 x 3 =	7 x 5 =	3 x 5 x 4 =	83 = _____ + 67

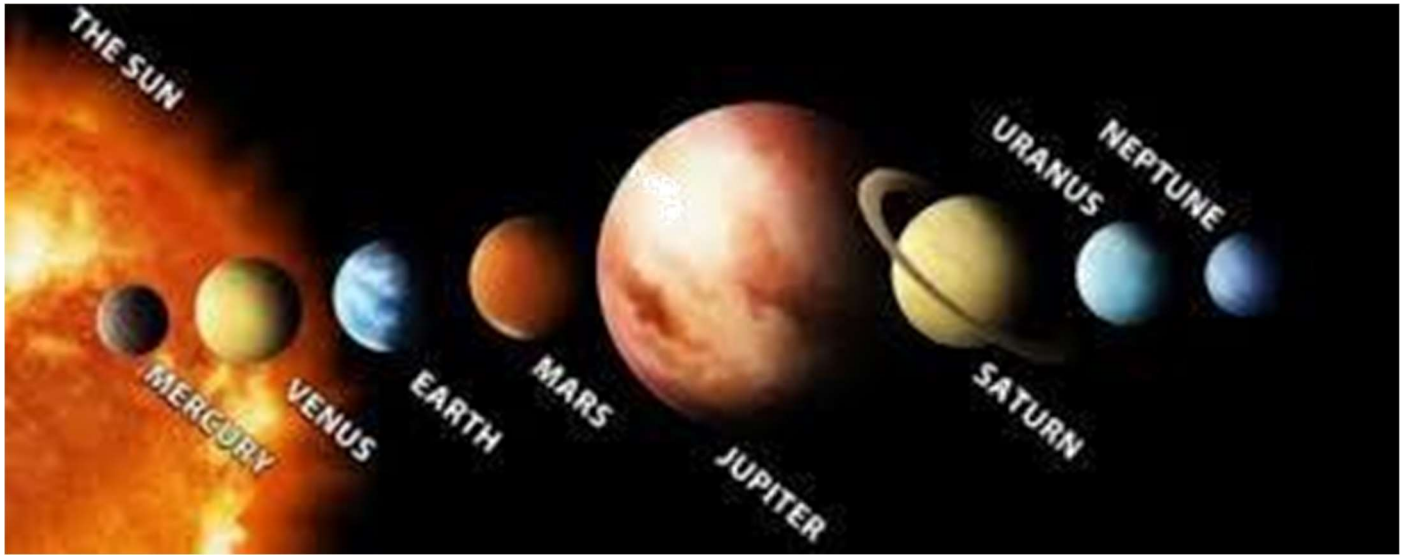
Rainbow Maths

Violet B

Name:

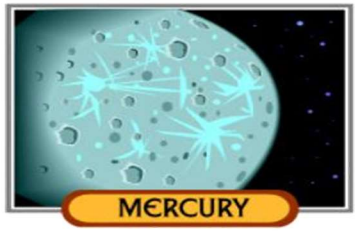
I know all my tables to 10 times 10 and division facts
I can add and subtract 2 digit numbers including decimals to 1 d.p.

8 x 6 =	18 ÷ 6 =	81 ÷ 9 =	2.4 + 3.6 =
3 x 7 =	8 x 9 =	56 ÷ 7 =	62.7 + 0.8 =
5 x 3 =	5 x 5 =	42 ÷ 6 =	1.9 + 0.5 =
4 x 6 =	4 x 7 =	32 ÷ 8 =	81 - 37 =
0 x 7 =	7 x 9 =	45 ÷ 5 =	16.3 + 35 =
7 x 7 =	4 x 8 =	54 = ____ x 6	17 + 1.4 =
3 x 9 =	36 = _____ x 6	48 = _____ x 8	2.7 + 1.5 =
7 x 6 =	3 x 8 =	8^2 =	5.1 - 1.8 =
6 x 3 =	28 = _____ x 4	27 = _____ x 3	49 + 86 =
9 x 5 =	9 x 4 =	_____ = 7 x 5	57 + 28 =
6 x 9 =	5 x 8 =	32 ÷ 4 =	3.5 - 2.7 =
7 x 8 =	16 ÷ 2 =	9^2 =	58 + 15 =
6 x 6 =	9 x 5 =	4 x 25 =	57 - 36 =
5 x 7 =	9 x 9 =	3 x 3 x 4 =	78 - _____ = 67



Hampton Hill Planet Maths

Planet Maths

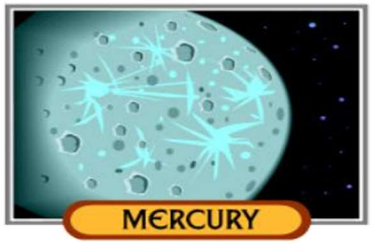


Name:

A

Sequences	4 Operations	Fractions	Round to the nearest whole number
4, 8, ☐ 16, 20, ☐ 28 ☐	21 + 14 =	1/2 of 20 =	3.1 =
9, 12, ☐ ☐ 21, 24, ☐	62 + 27=	1/4 of 32 =	3.6 =
81, 72, 63, ☐ ☐ 36, ☐	33 + 42 + 14 =	1/2 of 38 =	4.5 =
50, ☐ 70, ☐ 90, ☐	48 – 5 =	1/4 of 160 =	18.2 =
24, 22, 20, ☐ ☐ ☐	53 – 31 =	1/2 0f 90 =	19.7 =
☐ 10, 15, ☐ ☐ ☐ 35	963 – 421 =	1/4 of 48 =	23.6 =
66, ☐ 44, 33, ☐ ☐	21 × 2 =	1/2 of 300 =	42.5 =
24, 32, ☐ ☐ 56, 64 ☐	10 × 3 × 2 =	1/4 of 120 =	82.3 =
48, 42, ☐ 30, ☐ 18 ☐	48 ÷ 6 =	1/2 of £50 =	34.4 =
7, 14, 21, 28, ☐ ☐ ☐	90 ÷ 5 =	1/4 of £10 =	99.1 =

Planet Maths



Name:

B

Sequences	4 Operations	Fractions	Round to the nearest whole numbe
3 6 9 ☐ ☐ ☐	56 + 6 =	1/2 of 6p =	5.1 =
14 ☐ 10 8 ☐ ☐	74 + 9 =	1/4 of 40p =	1.8 =
3 5 ☐ 9 ☐ 13	12 + 6 + 20 =	1/2 of 23 cm =	34.4 =
72 ☐ 70 69 ☐ ☐	11 − 5 =	1/4 of 22 =	6.7 =
☐ 8 ☐ 16 ☐ 24	93 − 40 =	1/3 of 6 =	82.3 =
☐ 10 ☐ 20 ☐ 30	901 − 859 =	1/3 of 90 =	42.7 =
☐ 0.5 ☐ ☐ 0.8 ☐	42 × 3 =	1/8 of 16 =	33.14 =
☐ 0.9 ☐ ☐ 1.5 ☐	5 × 4 × 10 =	1/5 of 45 =	12.35 =
☐ 3.3 ☐ ☐ 2.7 ☐	☐ ÷6 = 4	1/4 of £240 =	34.57 =
2.9 ☐ ☐ 2 ☐ ☐	☐ ÷5 = 9	1/8 of £72 =	55.55 =

Planet Maths

Name:

A

Find the value of	4 Operations	Problem Solving	How many cm in these?
4 twenties and 2 fives?	0.9 + 1.2 =	Find the cost of 4 books at 28p each?	1 metre = cm
7 twos and 4 ones?	5.4 + 1.8=	What will 9 pencils cost if one is 8p?	4 metres = cm
2 tens and 2 fives?	9.3 – 4.5=	How much will you pay for 14 rubbers at 5p?	6 metres = cm
8 threes and 4 fives?	14.7 – 7.3 =	Find the cost of 12 rulers at 12p each?	1/2 metre = cm
10 twos and 5 tens?	23p + 42p + 16p =	What will 5 packs of crayons cost at 17p each?	2 1/2 metres = cm
6 fives and 12 tens?	18p + 34p + 26p =	How much will it cost for 5 diaries at 16p each?	3 1/2 metres = cm
5 fives and 3 twenties?	48 × 4 =	Find the total cost of 5 pens at 24p each?	7 1/2 metres = cm
9 twos and 4 twenties?	250 × 6 =	What is the difference between 70p and 27p?	5 metres = cm
8 sevens, 2 twenties and 3 tens?	99 ÷ 11 =	Take the sum of 16p and 12p from 75p?	10 metres = cm
4 tens, 3 fives and 7 twos?	0 ÷ 9 =	How many people can have 4p out of 92p?	8 1/2 metres = cm

Planet Maths

Name:

B

Adding Decimals	4 Operations	Fractions	change the % to the correct fraction
0.9 + 1.2 =	68 x 4 =	2/3 of 57 =	50% = /150
3.7 + 2.7 =	57 x 5 =	2/5 of 30 =	25% = 15/
5.4 + 1.85 =	22 x 3 =	3/4 of 44 =	75% = 150/
17.66 + 6.8 =	82 x 3 =	2/7 of 49 =	10% = 30/
13.8 + 23.3 =	23p + 42p + 16p =	3/5 of 80 =	12% = /200
74 + 9.84 =	78p + 34p + 26p =	4/5 of 35 =	100% = /600
8.3 + 23.9 =	48×6 =	2/3 of 24 =	5% = /400
15.2 + 20.1 =	250 ×6 =	3/4 of 32 =	20% = 20/
17.3 + 6.26 =	77÷11=	2/3 of 66 =	1% = 5/
16.55 + 3.5 =	0÷11=	4/5 of 45 =	6% = /300

Planet Maths

Name:

A

Addition	The change from 75p if you spend:	Mass – How many	÷ 6
72 + 19 =	14p	50g masses equal 400g ?	6 ÷ 6 =
140 + 76 =	32p	20g masses equal 360g ?	2.4 ÷ 6 =
95 + 44 =	19p	10g masses equal 600g ?	42 ÷ 6 =
261 + 29 =	16p	10g masses equal 70g ?	60 ÷ 6 =
143 + 88 =	66p	5g masses equal 80g ?	120 ÷ 6 =
232 + 134 =	13p	500g masses in 15kg ?	300 ÷ 6 =
139 + 144 =	54p	100g masses in 6.9kg ?	7.2 ÷ 6 =
119 + 106 =	47p	200g masses in 7kg?	108 ÷ 6 =
247 + 164 =	69p	50g masses in 4.6kg ?	180 ÷ 6 =
33 + 89 =	6p	10g masses in 0.3kg ?	4.8 ÷ 6 =

Planet Maths

Name:

B

Subtraction	Write in the missing sign < or >	Problem Solving	Brackets
28 – 9 =	7.6 ☐ 7.3	What is the difference between 85 and 73?	39 – (4 x 8) =
42 – 4 =	8.9 ☐ 9.8	Find the sum of 19 and 32?	(7 x 8) + 5 =
21 – 5 =	13.4 ☐ 12.4	How many centimetres in 4 metres?	41 – (12 + 9)=
33 – 7 =	7.5 ☐ 9.1	Total 18,5 and 11?	28 – (6 x 4) =
70 – 4 =	9.25 ☐ 9.52	A box holds 25 tea bags. How many tea bags in 10 boxes?	(5 x 7) + 6=
85 – 9 =	8.45 ☐ 8.72	What is the value of the 6 in 2065?	36 – (19 + 4)=
56 – 9 =	16.1 ☐ 16.01	Find the sum of the first five even numbers?	(8 x 7) + 12 =
37 – 9 =	14.65 ☐ 14.56	Four sweets cost 9p each. How much change from £0.50?	31 – (18 + 9) =
66 – 8 =	30.72 ☐ 29.99	What is the product of 18 and 6?	70 – (6 x 8) =
53 – 5 =	5.67 ☐ 9.43	How many minutes is it from 6.45pm to 7.20pm?	44 – (19 + 14) =

Planet Maths

Name:

A

Positive and Negative	Powers of 10	Find all factors of the following	Increase all by 10%
What temperature is 18°C warmer than -13°C ?	6 x ____ = 60	8	57
What temperature is 12°C colder than -4°C ?	3 x ____ = 3000	12	230
What temperature is 23°C warmer than -7°C ?	____ x 10 = 67	13	14
What temperature is 16°C colder than 9°C ?	47.5 x ____ = 475	18	1000
Add 14 to -9	____ x 1000 = 70	16	590
Subtract 12 from 8	____ x 100 = 7.4	24	5500
Subtract 6 from 1	31.3 x ____ = 3130	11	99
Add 9 to -5	4×10^2 =	20	150
£50 - £71	104×10^2 =	23	700
-£27 + £39	0.19×10^2 =	35	1000000

Planet Maths

Name:

B

Find the mean of these numbers	Timestables	Name the shape	Put into ascending order
2 1 4 1 2 6 6 3 2	4 x 9 =	4 right angles, 4 equal sides	5, -9, 2, -3, 1
10 9 7 11 3	7 x 8 =	3 angles each of 60°	7, 4, -2, -8, -6
7 5 7 6 8 7 9	12 x 5 =	4 equal sides, 2 pairs of equal angles	3, 0 , -6, -1, 12
3 3 6	20 x 20 =	2 right angles, 1 pair of parallel sides	14, -23, -17, 27, 48
4 5 4 5 4 2	60 x 5 =	3 sides all unequal	31, 27, -13, -41, -16
12 11 10 3	6 x 8 =	2 pairs parallel sides, 4 right angles	8, 5, -9, 2, 0
105 95	13 x 4 =	6 faces, 12 equal edges	9, -17, -3, 12
24 25	15 x 0 =	5 faces, 5 corners, 4 right angles	203, -429, -105, 329
3 3 3 1	9 x 9 =	2 triangular faces, 3 rectangular faces	0, -32, 19, 7
48 52 35 65	35 x 3 =	6 unequal sides	0, -5, 3, 9, -4

Planet Maths

Name:

A

Multiply the following by 10	Divide the following by 10	Cancel these ratios to lowest terms	Divide according to ratio
2.35 =	232.6 =	12 : 16 =	£10 in the ratio 3 : 2
0.49 =	13.7 =	28 : 21 =	£20 in the ratio 4 : 1
129.54 =	65.34 =	12 : 60 =	£14 in the ratio 5 : 2
0.006 =	9.59 =	40 : 48 =	£24 in the ratio 3 : 1
0.359 =	0.659 =	25 : 10 =	£18 in the ratio 5 : 1
9584.5 =	58315.7 =	144 : 120 =	£16 in the ratio 5 : 3
0.01 =	56.79 =	36 : 18 =	£40 in the ratio 2 : 3
3.0002 =	0.0052 =	8 : 2 =	£45 in the ratio 7 : 2
10.0 =	1001 =	20 : 30 =	£20 in the ratio 2 : 2 : 1
39.96 =	7.28 =	6 : 15 : 21 =	£12 in the ratio 3 : 2 : 1

Planet Maths

Name:

B

Multiply the following by 100	Divide the following by 100	Cancel these ratios to lowest terms	Divide according to ratio
6.95 =	512.6 =	110 : 90 =	£66 in the ratio 6 : 5
0.66 =	32.7 =	100 : 150 =	£50 in the ratio 5 : 4 : 1
739.5 =	53.34 =	8 : 16 : 32 =	£30 in the ratio 3 : 2 : 1
0.009 =	1.99 =	12 : 18 : 36 =	£27 in the ratio 5 : 3 : 1
0.572 =	0.321 =	16 : 32 : 56 =	£70 in the ratio 6 : 3 : 1
84.54 =	49615.7 =	9 : 18 : 45 =	£96 in the ratio 7 : 3 : 2
0.030 =	21.43 =	30 : 45 : 90 =	£120 in the ratio 5 : 3 : 2
9.0002 =	5.52 =	36 : 48 : 72 =	£84 in the ratio 5 : 4 : 3
60.0 =	3003 =	24 : 72 =	£108 in the ratio 5 : 2 : 2
79.926 =	3.73 =	144 : 120 =	£60 in the ratio 2 : 2 : 1

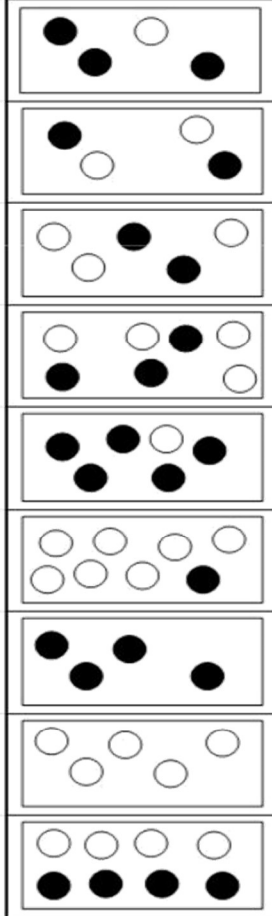
Planet Maths

Name:

A

Multiply each number by 100	
27	
369	
50	
4.5	
0.63	
0.029	
7.9	
3.75	
0.0048	

Find the probability of a shaded counter being drawn out of the box



If a = 6, b = 4 and c = 10 find the following	
c x a	
25 - c + a	
4b	
b x b	
2a + 3c	
a x b x c	
20 - a - b - c	
c - 5 + 4a	
$a^2 + b^2 + c^2$	

Mixed Bag
List the factors of 18
List the factors of 12
List the factors of 30
Find the first 3 common multiples of 3 and 5
Write one fifth as a decimal
Write two fractions the same as 0.6?
8cm 2cm Perimeter?
199 x 3 =
? 30 ? =

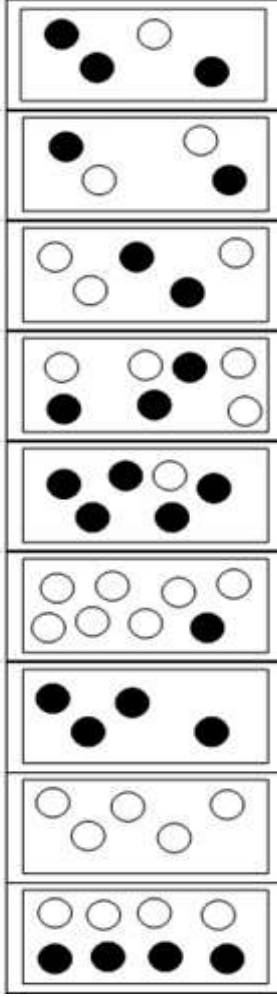
Planet Maths

Name:

B

Multiply each number by 1000	
39	
286	
19	
6.7	
0.53	
0.0047	
32.9	
9.275	
0.048	

Find the probability of a white counter being drawn out of the box



If a = 8, b = 5 and c = 12 find the following	
c x a	
25 - c + a	
4b	
b x b	
2a + 3c	
a x b x c	
$b^2 + c^2$	
c - 5 - 2a	
$a^2 + b^2 + c^2$	

Mixed Bag
List the factors of 24
List the factors of 20
List the factors of 36
Find the first 3 common multiples of 4 and 5
Write one third as a decimal
Write two fractions the same as 0.75?
9cm 7cm Perimeter?
199 x 3 =
60 ? ? =

Planet Maths

Name:

A

What number is half way between..		Change the following from grams (g) to kilograms (Kg)		Find these % amounts		Change these fractions to their lowest terms	
7 and 1		5000 g		20% of 90		4 / 8	
5 and -1		805 g		30% of 50		8 / 12	
3 and -9		250 g		70% of 80		20 / 24	
-6 and -2		9352 g		90% of 500		5 / 20	
-6 and -14		42 g		5% of 420		10 / 50	
12 and 82		3560 g		15% of 60		15 / 25	
0 and -8		36000 g		70% of 80		9 / 15	
14 and -6		1 g		15% of 420		60 / 80	
2 and -34		16 g		90% of 20		18 / 21	

Planet Maths

Name:

B

What number is half way between..	
12 and 4	
10 and -2	
6 and -18	
15 and 32	
-28 and -6	
24 and 42	
0 and -16	
14 and -14	
2 and -44	

Change the following from grams (g) to kilograms (Kg)	
8000 g	
565 g	
750 g	
2539 g	
69 g	
6530 g	
92000 g	
4 g	
11 g	

Find these % amounts	
20% of 110	
30% of 80	
70% of 140	
90% of 600	
5% of 320	
15% of 200	
70% of 140	
15% of 620	
90% of 40	

Change these fractions to their lowest terms	
6 / 12	
7 / 10	
16 / 24	
25 / 100	
40 / 200	
15 / 45	
6 / 21	
120 / 160	
18 / 81	