

Year 1 and Year 2

Addition

Subtraction

Multiplication

Division

Number Facts

Year 1

Count to 100 from any number

Know and use number bonds and subtraction facts within 20.

Count, read and write numbers to 100 in numerals.

Identify 1 more and 1 less

Use/know vocabulary of add/subtract/equal to/more than/less than (and + - =)

Add/subtract 1-digit & 2-digit numbers to 20.

Count aloud in ones, twos, fives or tens.

Year 2

Read and write numbers to at least 100 in numerals and words

Explain what each digit in a two-digit number represents

Know all pairs of multiples of 10 with a total of 100 (eg 70 + 30).

Recall all addition and subtraction facts to 20

Add two 2-digit numbers

Partition two-digit numbers in different ways, including into multiples of 10 and 1

Know multiplication facts of 2, 3, 5 and 10.

Recognise odd and even numbers.



Number bonds to 10
eg, $10 + 0 = 10$, $9 + 1 = 10$
Addition facts for numbers up to 10
 $6 + 0 = 6$; $5 + 1 = 6$; $4 + 2 = 6$...

Numbers bonds to 20 \rightarrow $19 + 1$;
 $18 + 2$; $17 + 3$
All addition facts to 11, 12, 13 ...20

Multiples of 10 and multiples of 5 which
add up to 100...
 $70 + 30$, $45 + 55$ etc

Doubles and near doubles
 $6 + 6 = 12$, $6 + 7 = 13$, $6 + 5 = 11$
 $35 + 35 = 70$, $35 + 36 = 71$ etc

Place value- What is the number made up of?
How many tens? How many units?

Addition and Subtraction

Year 1

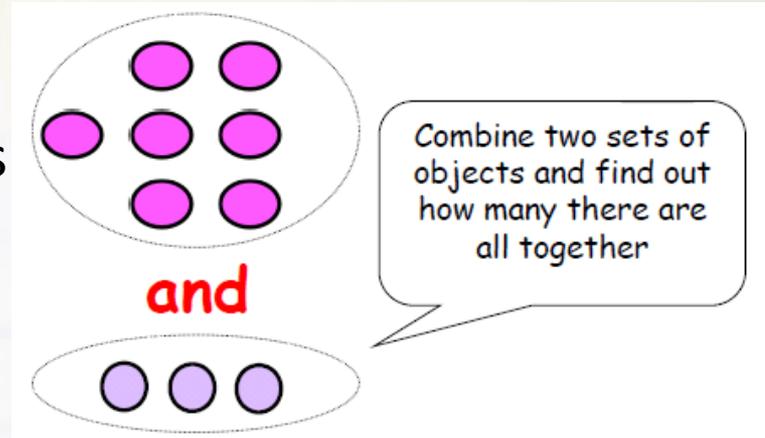
- read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

Year 2

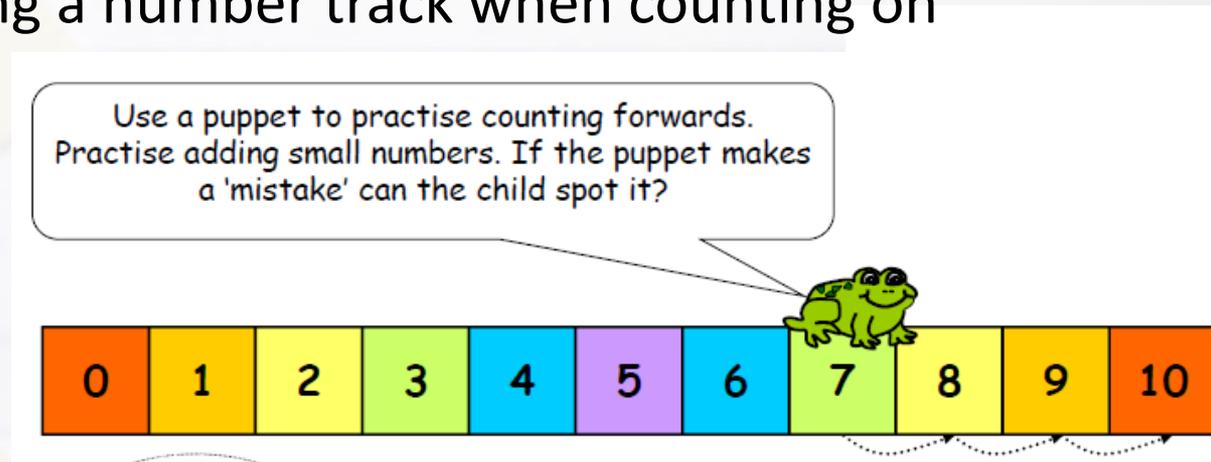
- applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Addition

1. Using objects/ pictures



2. Using a number track when counting on

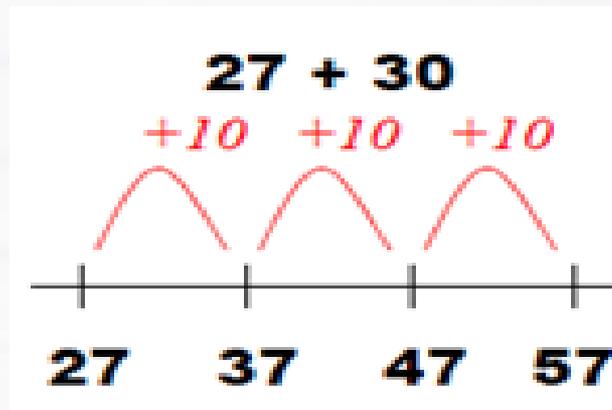


2. Using number lines practically when adding

Counting on



Adding tens



*This method is not always recorded as it is easy to make errors with the number of jumps.

3. Addition with number square

Using known facts to quickly add 1/ 10

- Adding 10 go down 1 ↓
- Subtracting 10 up 1 ↑
- Adding 1 go right 1 →
- Subtracting 1 go left 1 ←

Using this to help with adding/ subtracting 9 or 11

Using known facts to add multiples of 10

$$4+6=10$$

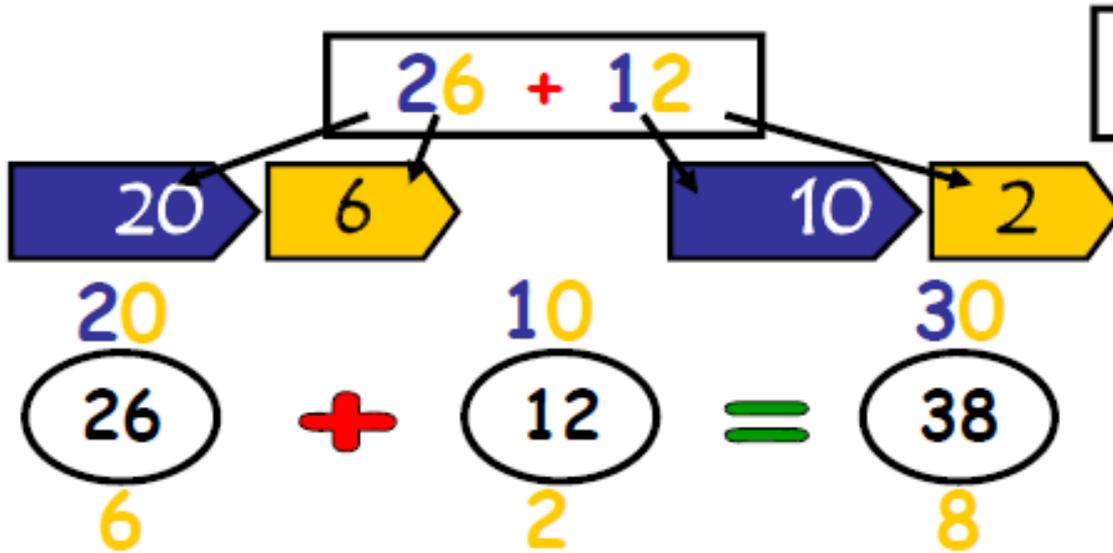
$$14+6=20$$

$$24+6=30$$

$$40+60=100$$

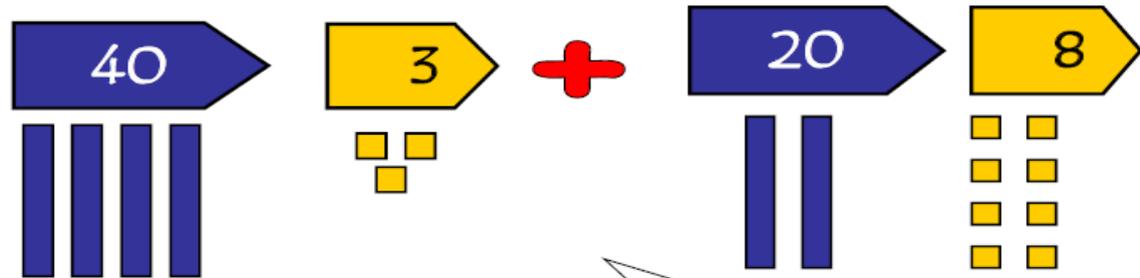
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

4. Partition and recombine practically



Adding the units, then the tens and then adding them together, without bridging though 10

Adding the units, then the tens and then adding them together, bridging though 10



Tens		Units		
40	+	3		
20	+	8		
60	+	11	=	71

Use place value cards and place value apparatus alongside written jottings. Partition the numbers into tens and units, add and then recombine.

5. Partitioning numbers to then recombine (always adding the units first)

$$23 + 34 =$$

$$3 + 4 = 7$$

$$20 + 30 = 50$$

$$50 + 7 = 57$$

2	0	+	3		
+	3	0	+	4	
<hr/>					
5	0	+	7		
			=	<u>5</u>	<u>7</u>

$$58 + 43 =$$

$$8 + 3 = 11$$

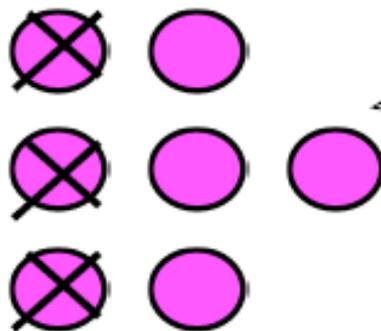
$$50 + 40 = 90$$

$$90 + 11 = 101$$

5	0	+	8		
4	0	+	3		
<hr/>					
9	0	+	1	1	
			=	<u>1</u>	<u>0</u>
					<u>1</u>

Subtraction

1. Using objects/ pictures

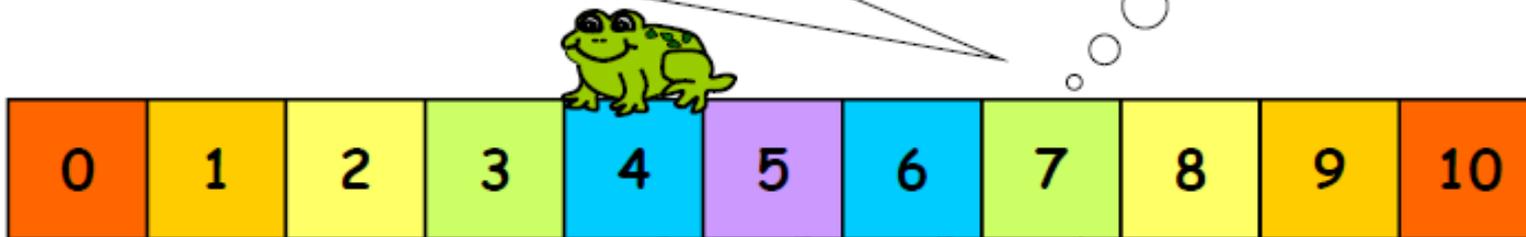


Take away objects from a group and count how many are left

2. Using a number track when counting back

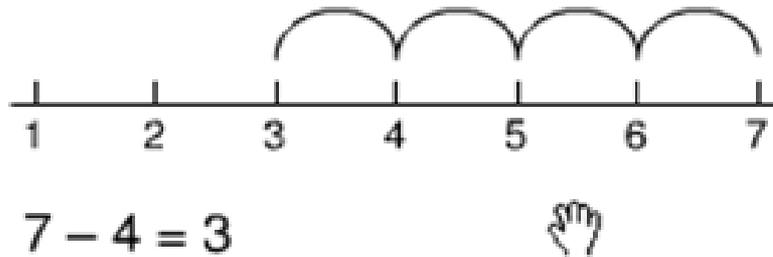
Use a puppet to practise counting backwards. Practise taking away small numbers. If the puppet makes a 'mistake' can the child spot it?

What happens if we start at 7 and take away 3?

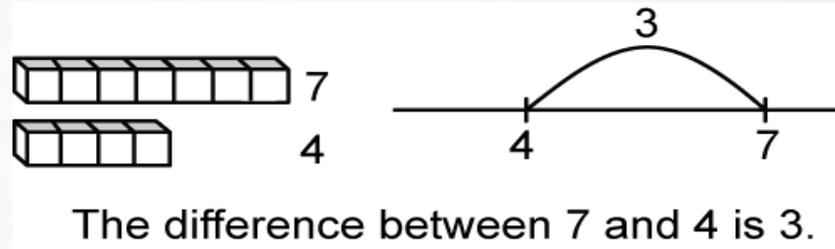


2. Using number lines (Practically)

Counting back



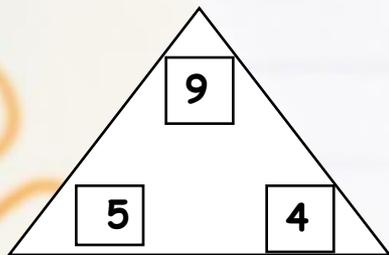
Finding the difference





Number triangles are BRILLIANT.
Know 1 FACT, know 4 FACTS!
They will help you a lot with addition and subtraction...

Example



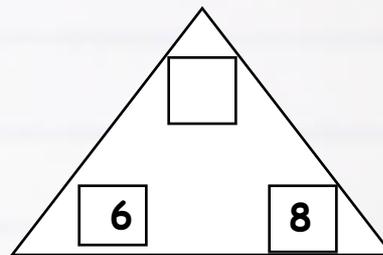
$$5 + 4 = 9$$

$$4 + 5 = 9$$

$$9 - 5 = 4$$

$$9 - 4 = 5$$

Complete...

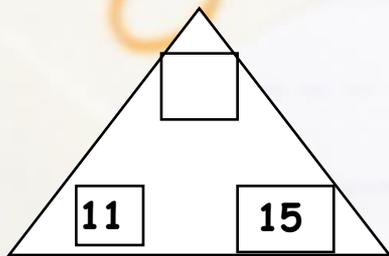


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

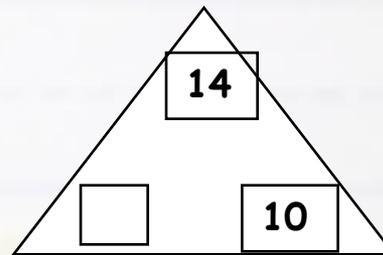


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

3. Using known number facts/ number families

$$6+4=10 \quad 4+6=10 \quad \text{so} \quad 10-4=6 \quad 10-6=4$$

Making connections:

$$10-4=6$$

$$10-6=4$$

$$100-40=60$$

$$20-4=16$$

$$30-6=24$$

$$100-60=40$$

$$150-4=146$$

$$180-6=174$$

3. Partitioning 2nd number (always taking the units first)

1. Not crossing through through 10

TU

$$28 - 13 =$$

$$28 - 3 = 25$$

$$25 - 10 = 15$$

2. Bridging though 10

TU

$$53 - 26 =$$

$$53 - 6 = 47$$

$$47 - 20 = 27$$

Multiplication and Division

Year 1

- solve **one-step problems involving multiplication and division**, by calculating the answer **using concrete objects, pictorial representations and arrays** with the support of the teacher.

Year 2

- **recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers**
- **calculate mathematical statements for multiplication and division** within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs
- show that **multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot**
- solve problems involving **multiplication and division**, using materials, **arrays, repeated addition, mental methods, and multiplication and division facts**, including problems in contexts.

Multiplication

1. Using objects/ pictures (repeated addition)

How many legs will 3 teddies have?



$$2 + 2 + 2 = 6$$

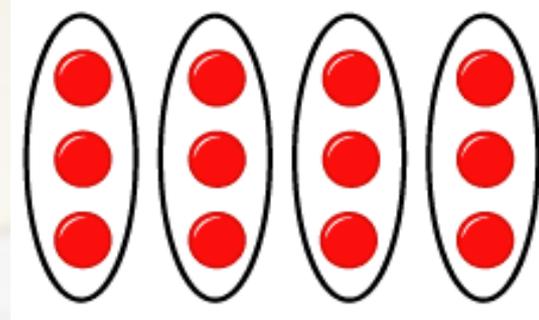
2. Counting groups of (repeated addition)

There are 3 sweets in one bag.
How many sweets are in 5 bags altogether?



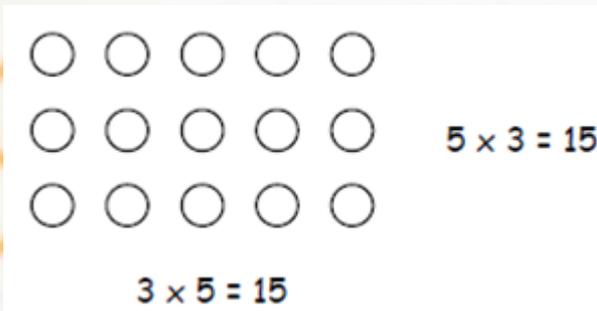
$$3 + 3 + 3 + 3 + 3 = 15$$

3. Counting groups of
(repeated addition)



4 groups of 3 = $3+3+3+3=12$

4. Using arrays



$$5 \times 3 = 3 + 3 + 3 + 3 = 15$$

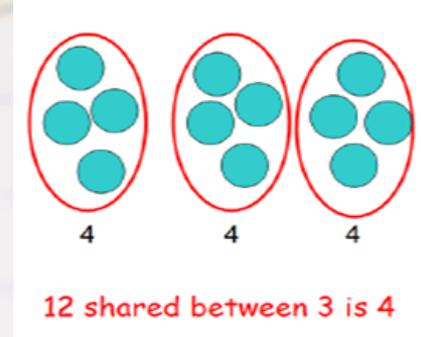
$$3 \times 5 = 5 + 5 + 5 = 15$$

5. Knowing multiplication facts for at least 2, 5 and 10

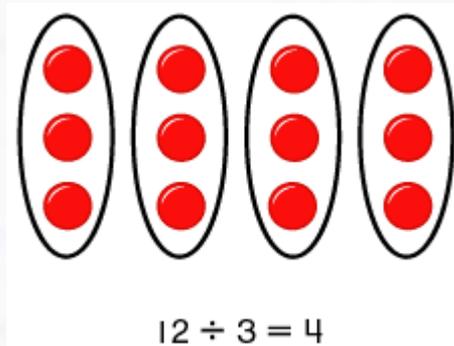
Division

How many groups of 4 can be made with 12 stars? = 3

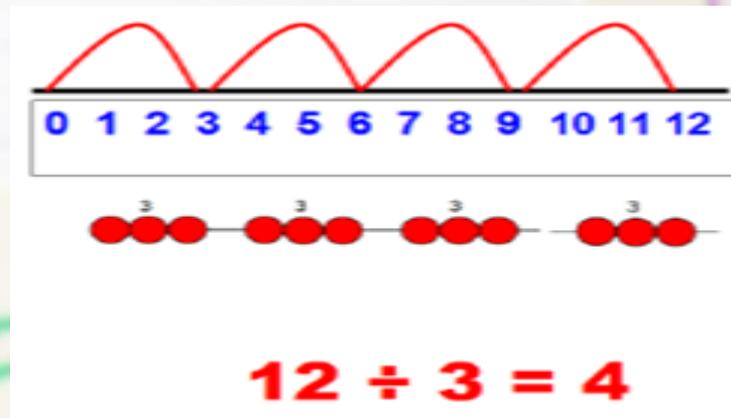
1. Grouping/ sharing between (using objects, pictures or diagrams)



2. Using arrays

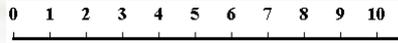


3. Grouping using a number line



Resources

Number line



Numicon



Number 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
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71	72	73	74	75	76	77	78	79	80
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91	92	93	94	95	96	97	98	99	100

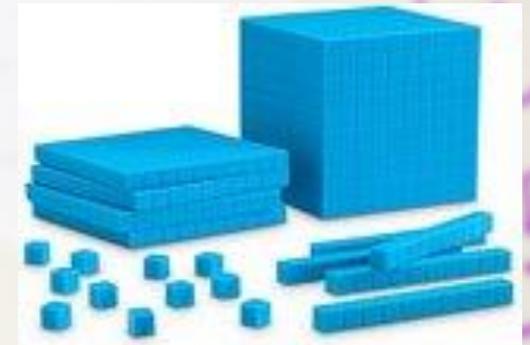
Counters



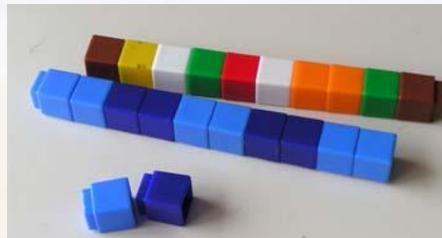
Place value card



Deines (hundreds, tens and units)



Unifix/multilink sticks



Practical maths

Making maths practical and fun by using real materials.
Try some of these at home with your child.

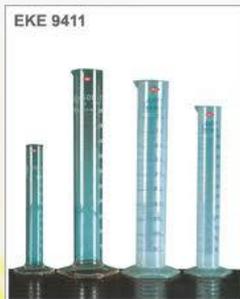
- Using money



using food



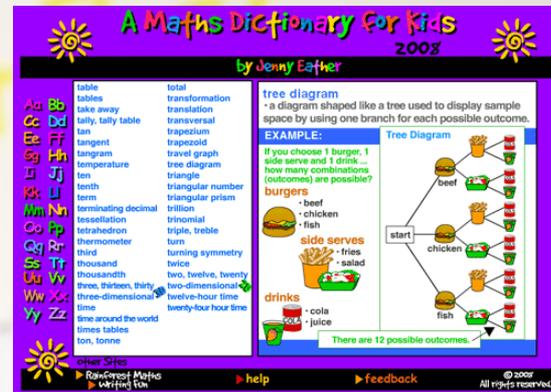
- Using measuring cups/equipment when cooking



Useful websites



www.bbc.co.uk/bitesize/ks1/maths



<http://amathsdictionaryforkids.com/>



www.mathsisfun.com



<http://games.e4education.co.uk>



www.ictgames.co.uk

Square box, round pizza,
triangle slices.



...I'M
CONFUSED!

DespicableMeMinions.org

Thank you

(a little maths for you to think about...
Who said maths isn't fun?!)

**DEAR MATH,
PLEASE GROW UP AND
SOLVE YOUR
OWN
PROBLEMS,
I'M TIRED OF
SOLVING THEM
FOR YOU.**



Think of a number
between
0 and 20.
Add 32 to it.
Multiply by 2.
Subtract 1.
Now close
your eyes.
Its dark Isn't it



VIA 9GAG.COM

MATH

The only place
where
people
buy 64
watermelons
and
no one
wonders why...

