

Year 3

Maths Examples

1 Know the 2, 3, 5, 10 times tables

0	x	2	=	0
1	x	2	=	2
2	x	2	=	4
3	x	2	=	6
4	x	2	=	8
5	x	2	=	10
6	x	2	=	12
7	x	2	=	14
8	x	2	=	16
9	x	2	=	18
10	x	2	=	20
11	x	2	=	22
12	x	2	=	24

0	x	5	=	0
1	x	5	=	5
2	x	5	=	10
3	x	5	=	15
4	x	5	=	20
5	x	5	=	25
6	x	5	=	30
7	x	5	=	35
8	x	5	=	40
9	x	5	=	45
10	x	5	=	50
11	x	5	=	55
12	x	5	=	60

0	x	10	=	0
1	x	10	=	10
2	x	10	=	20
3	x	10	=	30
4	x	10	=	40
5	x	10	=	50
6	x	10	=	60
7	x	10	=	70
8	x	10	=	80
9	x	10	=	90
10	x	10	=	100
11	x	10	=	110
12	x	10	=	120

0	x	3	=	0
1	x	3	=	3
2	x	3	=	6
3	x	3	=	9
4	x	3	=	12
5	x	3	=	15
6	x	3	=	18
7	x	3	=	21
8	x	3	=	24
9	x	3	=	27
10	x	3	=	30
11	x	3	=	33
12	x	3	=	36

Count in 10s

tens	ones
3	7

Counting up in tens this digit changes:

37 47 57 67 77 87

2 Place value

tens	ones
2	8

28 means 2 tens and 8 ones
20 and 8

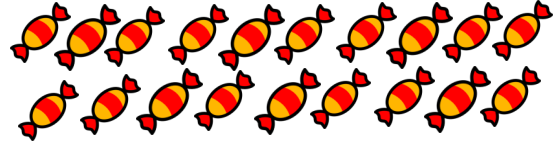
3 Estimate numbers

- Eyeball estimate



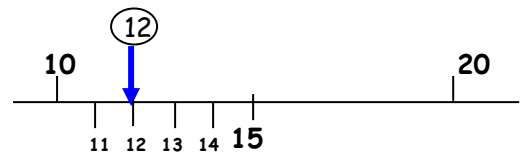
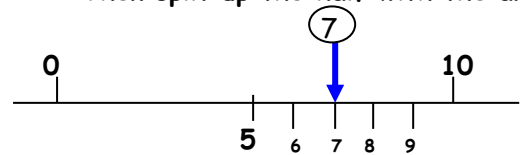
Here are 3 sweets

Use this to estimate larger amounts



- Estimate on a number line

Fill in the half way number first
Then split up the half with the arrow



4 Order numbers

Ten	Ones
3	7
3	2
7	6
6	2



- ♦ Begin at the tens and compare

76 is the biggest

62 is next biggest

Ten	Ones
3	7
3	2
7	6
6	2

- ♦ Move to the ones and compare

Order is: 76 62 37 32

4 (continued) Inequality symbols



We say: 9 **is bigger than** 5

We write: 9 **>** 5

We say: 5 **is smaller than** 9

We write: 5 **<** 9

5 Numbers in figures and words

1 one
2 two
3 three
4 four
5 five
6 six
7 seven
8 eight
9 nine
10 ten

11 eleven
12 twelve
13 thirteen
14 fourteen
15 fifteen
16 sixteen
17 seventeen
18 eighteen
19 nineteen

20 twenty
21 twenty one
22 twenty two
23 twenty three
24 twenty four
25 twenty five
26 twenty six
27 twenty seven
28 twenty eight
29 twenty nine

30 thirty
40 forty
50 fifty
60 sixty
70 seventy
80 eighty
90 ninety
100 one hundred

6 Addition & subtraction problems

Words for ADD

altogether

sum of

total

plus

Words for SUBTRACT

take away

how many left?

difference

how many more?

how many less?

7 Addition facts to 10

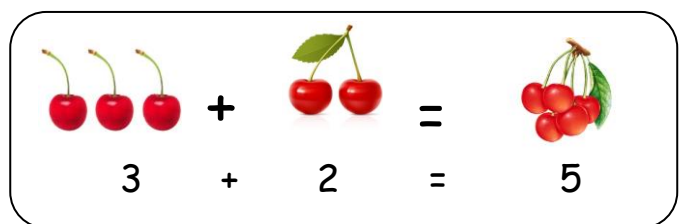
10									
9									
8									
7									
6									
5									
4									
3									
2									
1									

0 + 10	1 + 9	2 + 8	3 + 7	4 + 6
10 + 0	9 + 1	8 + 2	7 + 3	6 + 4
		5 + 5		

Addition facts to 20

10 + 10	11 + 9	12 + 8	13 + 7	14 + 6
15 + 5	16 + 4	17 + 3	18 + 2	19 + 1
		20 + 0		

Subtraction is the inverse of addition

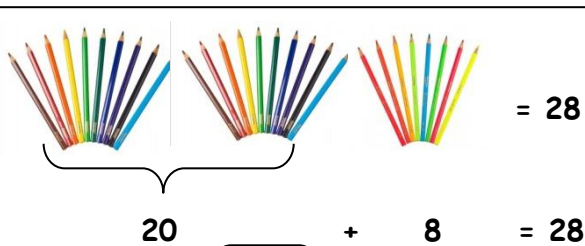


$$5 - 2 = 3$$

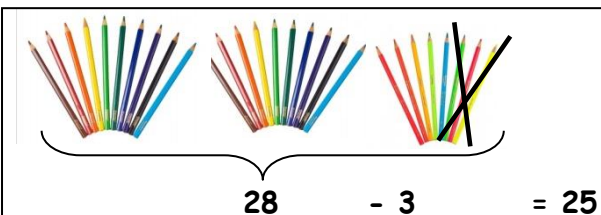


$$5 - 3 = 2$$

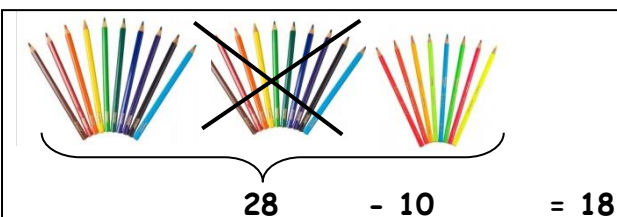
8 Add & subtract



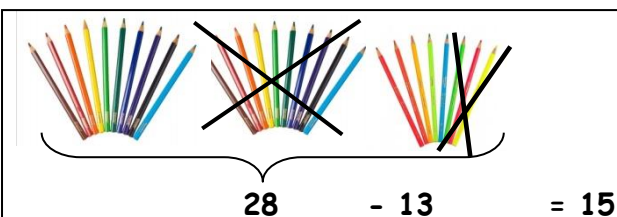
$$\begin{array}{r} 20 \\ + 8 \\ \hline 28 \end{array}$$



$$\begin{array}{r} 28 \\ - 3 \\ \hline 25 \end{array}$$



$$\begin{array}{r} 28 \\ - 10 \\ \hline 18 \end{array}$$



$$\begin{array}{r} 28 \\ - 13 \\ \hline 15 \end{array}$$

9 Add & subtract

$7 + 3 = 10$ is the same as $3 + 7$



$10 - 7 = 3$ is NOT the same as $7 - 10$



10 Add & subtract

Fact family for add and subtract

$$13 + 7 = 20$$

$$20 - 13 = 7$$

$$20 - 7 = 13$$

11 2, 5, 10 times tables

♦ See 2/1

Odds & even numbers

- Even numbers - can be paired up



Tip - the last digit always 0 2 4 6 8

- Odd numbers - cannot be paired up



Tip - the last digit always 1 3 5 7 9

12 Multiply & divide

Words for MULTIPLY

times

product

double

triple

Words for DIVIDE

share

split

Words for EQUALS

is

gives

Fact family for multiply and divide

$$7 \times 5 = 35$$

$$35 \div 5 = 7$$

$$35 \div 7 = 5$$

13 Multiply & divide

$7 \times 5 = 35$ is the same as 5×7



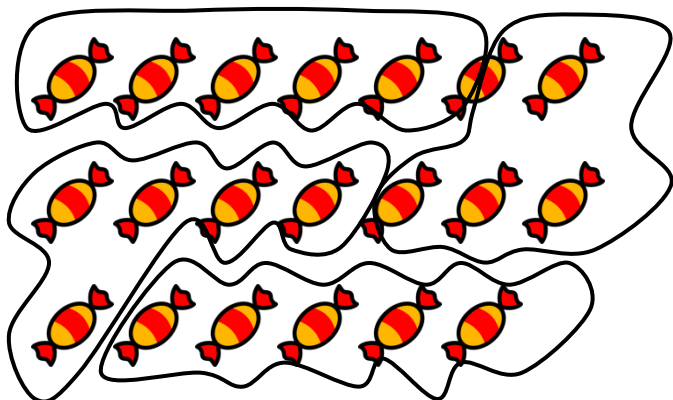
$35 \div 7 = 5$ is NOT the same as $7 \div 35$



14 Multiply & divide

Example1: Here are 20 sweets to share
Each child gets 5 sweets
How many children are there?

Divide them up into groups of 5 sweets-like this



There must be 4 children

Example2: Here are 12 marbles to share
There are 4 children.
How many marbles does each get?

Divide them up into 4 groups - like this



Each child gets 3 marbles

Repeated addition (Multiplication)



Here are 3 footballers.

How many legs do they have altogether?

Addition sentence $2 + 2 + 2 = 6$

Multiplication sentence $3 \times 2 = 6$

Repeated addition is the same as multiplication

Addition sentence	Multiplication sentence
$5 + 5 + 5 + 5 = 20$	$4 \times 5 = 20$
$10 + 10 + 10 = 30$	$3 \times 10 = 30$

Repeated subtraction (Division)

Repeated subtraction is the same as division

15

$\begin{array}{r} -5 \\ 10 \end{array}$ (1)

$\begin{array}{r} -5 \\ 5 \end{array}$ (2)

$\begin{array}{r} -5 \\ 0 \end{array}$ (3)

This is the same as
 $15 \div 5 = 3$

Because 5 has been
subtracted 3 times
to get to 0

Use a number line to show children



15 & 16 Fractions

To work out a half

Split into two equal parts

YES

NO!!!!

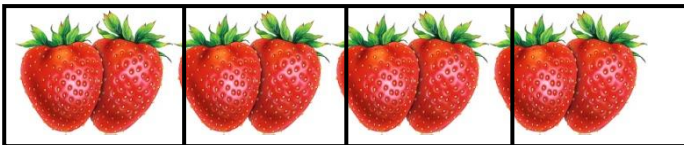
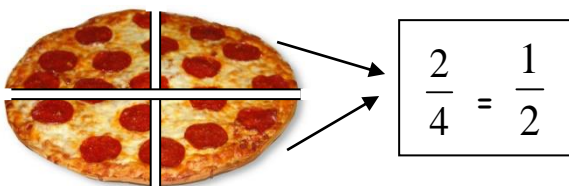


$$10\text{sweets} \div 2 = 5\text{sweets}$$

OR $\frac{1}{2}$ of 10 = $10 \div 2 = 5$

To work out a quarter

Split into four equal parts



8 strawberries \div 4 = 2 strawberries

OR $\frac{1}{4}$ of 8 = $8 \div 4 = 2$

17 Units of measure

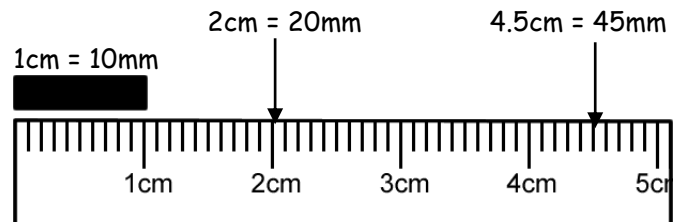
METRIC units of length are:

Millimetre (mm)

Centimetre (cm)

Metre (m)

Kilometre (km)



- ◆ A big stride is about a metre



- ◆ Distance to Dublin is measured in kilometres



METRIC units of mass are:

Gram (g)

Kilogram (kg)

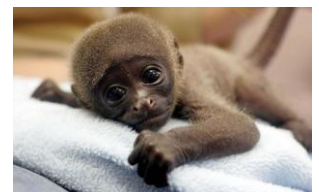


1 kilogram(kg) = 1000grams(g)

- ◆ An apple weighs 150grams



- ◆ Baby chimp weighs 3kg



17 Units of measure (continued)

METRIC units of capacity (liquids) are:

Millilitre (ml)



Centilitre (cl)



Litre (l)

- ♦ A medicine spoon holds 5ml



- ♦ A 5-litre bucket

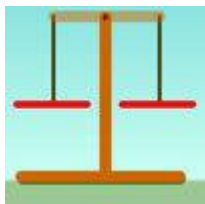


- ♦ Fuel for the car is measured in litres



18 Compare units of measure

Think of the units of mass then order:



a bar of chocolate
your teacher
a blown-up balloon
a loaf of bread

A blown-up balloon < a bar of chocolate < a loaf of bread < your teacher

Think of the units of length used then order:



How high you could jump in the air
How far you can kick a football
How far you can run in $\frac{1}{2}$ minute
Length of a bug

Length of a bug < you could jump in the air < you can kick a football < you can run in half a minute

19 Money

To write amounts of money

£3 or £3.00

50p or £0.50

£3.50 or 350p **BUT never £3.50p or £3.5**

Value of coins



1p or £0.01

2p or £0.02

5p or £0.05

10p or £0.10

20p or £0.20

50p or £0.50

£1 or £1.00

£2 or £2.00

20 Bills and change

To add amounts of money

$$\begin{aligned} & 24p + 32p \\ &= 20p + 4p + 30p + 2p \\ &= 20p + 30p + 4p + 2p \\ &= 50p + 6p \\ &= 56p \end{aligned}$$

To find change from £1

Subtraction method

$$\begin{aligned} & £1 - 56p \\ &= \underbrace{£1 - 50p} - 6p \\ &= 50p - 6p \\ &= 44p \end{aligned}$$

Add-on method

$$\begin{aligned} & 56p + 4p = 60p \\ & 60p + 40p = £1 \\ &= 4p + 40p \\ &= 44p \end{aligned}$$

21 Sequence of time

Smallest



Largest

Second(s) 60
Minute(min) 60
Hour(h) 24
Day 7
Week 4
Month 12
Year

22 Write time

My Clock

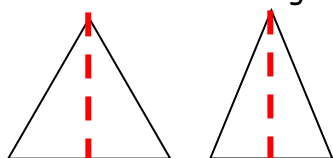


The time shown is:

5 past 6 OR 6:05

23 2D shapes

♦ 3 sides - Triangles

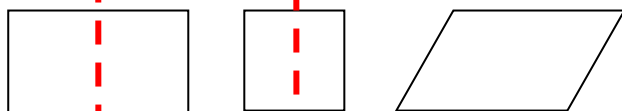


equilateral

isosceles

A vertical line of symmetry

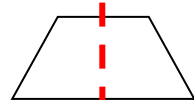
♦ 4 sides - Quadrilaterals



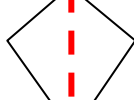
rectangle

square

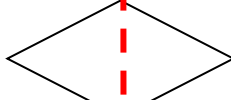
parallelogram



trapezium

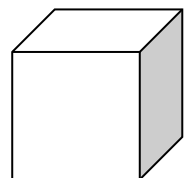


kite

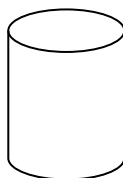


rhombus

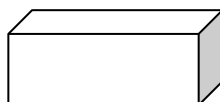
24 3D shapes



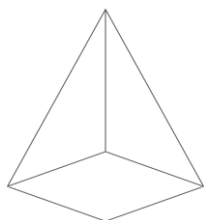
cube



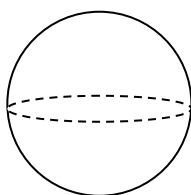
cylinder



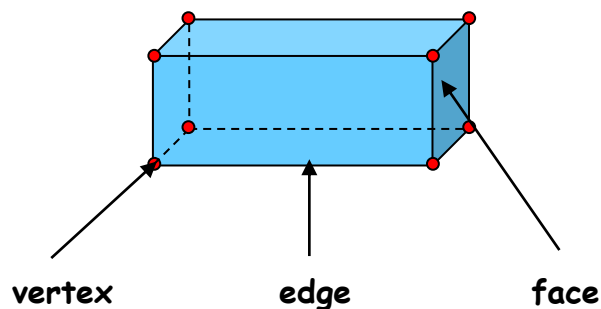
cuboid



pyramid



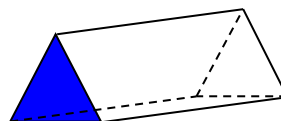
sphere



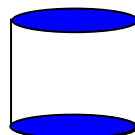
25 2D shapes on 3D shapes



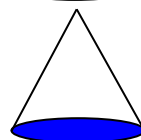
6 faces - all rectangles



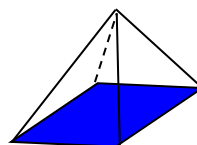
5 faces - 2 triangles
- 3 rectangles



3 faces - 2 circles
- 1 curved surface

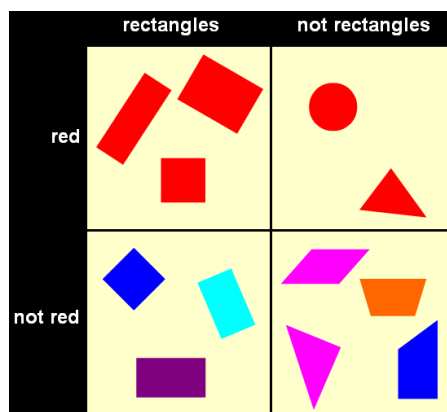


2 faces - 1 circle
- 1 curved surface

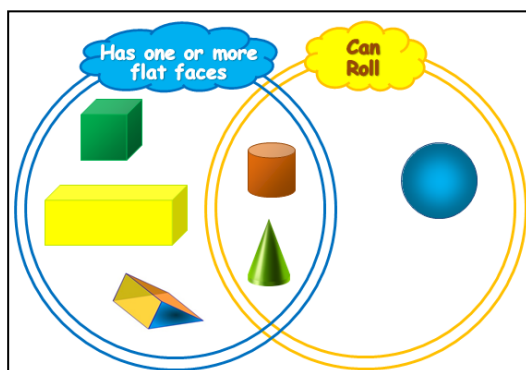


5 faces - 1 rectangle
- 4 triangles

26 To sort 2D shapes and 3D shapes



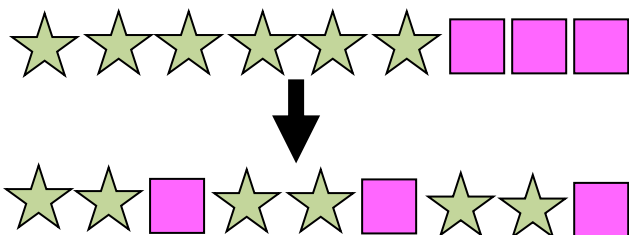
Carroll diagram



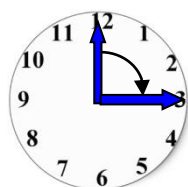
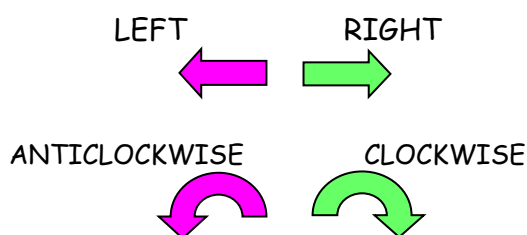
Venn diagram

27 Sequence of shapes

Make these shapes into a pattern



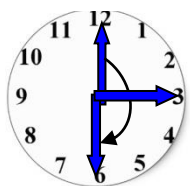
28 Describe position, direction & movement



Clockwise (1 right angle)
or $\frac{1}{4}$ turn



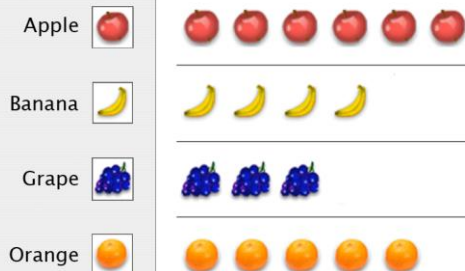
Anticlockwise (1 right angle)
or $\frac{1}{4}$ turn



Half turn (2 right angles)

29 Tables and graphs

Pictogram of
Year 2 favourite fruits



Tally chart showing animals in the zoo

Animal	Tally	Number of animals
Penguin	IIII	4
Lion	III	3
Snake	I	6
Giraffe	II	2
Monkey	II	7

Block graph to show animals in the zoo



30 Questions about tables and graphs

Example:

Questions about 'Animals in the zoo'

- How many animals are there altogether?

$$4+3+6+2+7=22$$

- How many more monkeys are there than lions?

$$7-3=4$$

- What animal is there least of?

giraffe