Phase 3 Maths Examples

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

0	x	2	=	0	0	x	5	=	0
1	x	2	=	2	1	x	5	=	5
2	x	2	=	4	2	x	5	=	10
3	x	2	=	6	3	x	5	=	15
4	x	2	=	8	4	x	5	=	20
5	x	2	=	10	5	x	5	=	25
6	x	2	=	12	6	x	5	=	30
7	x	2	=	14	7	x	5	=	35
8	x	2	=	16	8	x	5	=	40
9	x	2	=	18	9	x	5	=	45
10	x	2	=	20	10	x	5	=	50
11	x	2	=	22	11	x	5	=	55
12	x	2	=	24	12	x	5	=	60

0	x	10	=	0	0	x	3	=	0
1	x	10	=	10	1	x	3	=	3
2	x	10	=	20	2	x	3	=	6
3	x	10	=	30	3	x	3	=	9
4	x	10	=	40	4	x	3	=	12
5	x	10	=	50	5	x	3	=	15
6	x	10	=	60	6	x	3	=	18
7	x	10	=	70	7	x	3	=	21
8	x	10	=	80	8	x	3	=	24
9	x	10	=	90	9	x	3	=	27
10	x	10	=	100	10	x	3	=	30
11	x	10	=	110	11	x	3	=	33
12	x	10	=	120	12	x	3	=	36

Count in 10s

tens	ones
3	7

Counting up in tens this digit changes:

37 **4**7 **5**7 **6**7 **7**7 **8**7

2 Place value

tens	ones
2	8

28 means **2 tens** and **8 ones**
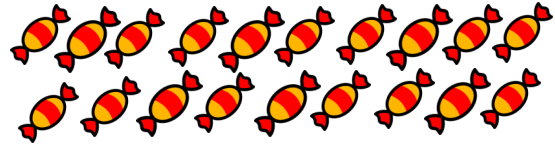
20 and **8**

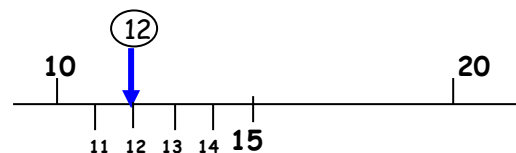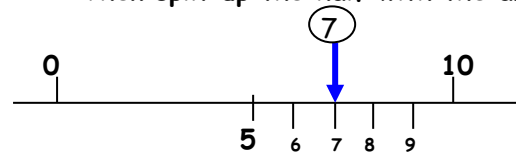## 3 Estimate numbers

- **Eyeball estimate**

Here are 3

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

⑦

0   10

5   6   7   8   9

⑫

10   20

11 12 13 14 **15**

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

Mr. Alligator is hungry for lunch

9 > 5

Find the biggest number and

MUNCH MUNCH MUNCH

| 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		11	eleven
2	two		12	twelve
3	three		13	thirteen
4	four		14	fourteen
5	five		15	fifteen
6	six		16	sixteen
7	seven		17	seventeen
8	eight		18	eighteen
9	nine		19	nineteen
10	ten			

20	twenty		30	thirty
21	twenty one		40	forty
22	twenty two		50	fifty
23	twenty three		60	sixty
24	twenty four		70	seventy
25	twenty five		80	eighty
26	twenty six		90	ninety
27	twenty seven		100	one hundred
28	twenty eight			
29	twenty nine			

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

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 |
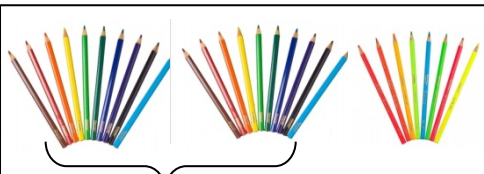
Subtraction is the inverse of addition
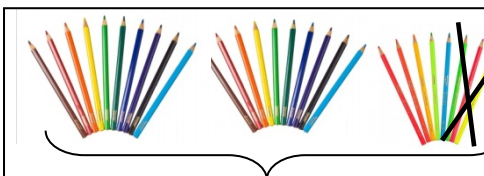
| 3 | + | 2 | = | 5 |

| 5 | - | 2 | = | 3 |

| 5 | - | 3 | = | 2 |
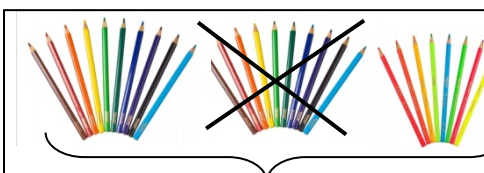
8 Add & subtract
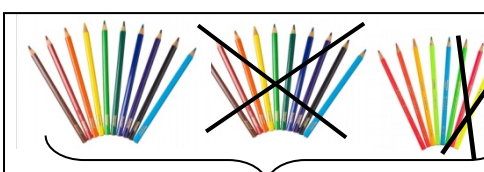
20   +   8   = 28

```
 20
  8 +
 28
```


28   – 3   = 25

```
 28
  3 –
 25
```


28   – 10   = 18

```
 28
 10 –
 18
```


28   – 13   = 15

```
 28
 13 –
 15
```

9 Add & subtract

7 + 3 = 10 is the same as 3 + 7 👍

10 – 7 = 3 is NOT the same as 7-10 👎

10 Add & subtact

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 ÷ 5 = 7   35 ÷ 7 = 5

13 Multiply & divide

7 x 5 = 35 is the same as 5 x 7

35 ÷ 7 = 5 is NOT the same as 7÷35

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14 Multiply & divide

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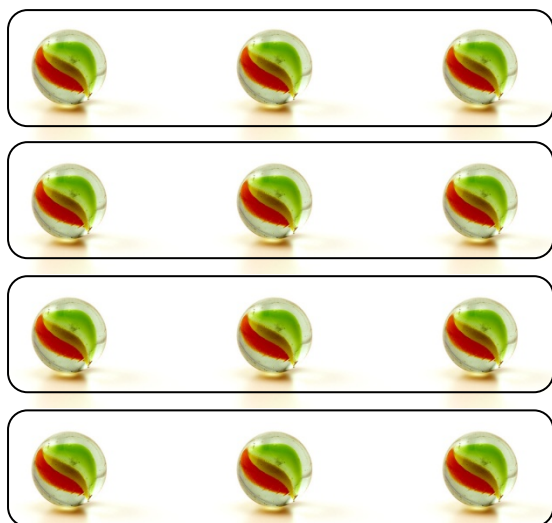Each child gets 5 sweets
How many children are there?

Divide them up into groups of 5 sweets-like this
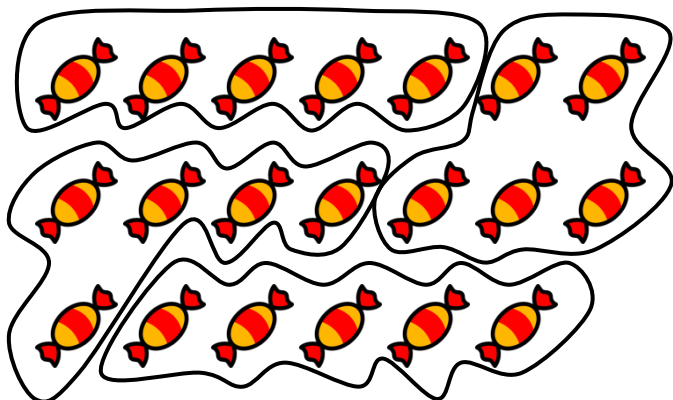
There must be 4 children

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	Multiplication sentence
2 + 2 + 2 = 6	3 x 2 = 6

Repeated addition is the same as multiplication

Addition sentence	Multiplication sentence
5 + 5 + 5 + 5 = 20	**4 x 5 = 20**
10 + 10 + 10 = 30	**3 x 10 = 30**

Repeated subtraction (Division)
Repeated subtraction is the same as division

```
15
-5 (1)
10
-5 (2)
 5
-5 (3)
 0
```

This is the same as
15 ÷ 5 = 3

Because 5 has been
subtracted 3 times
to get to 0

15 & 16 Fractions

To work out a half

Split into two equal parts
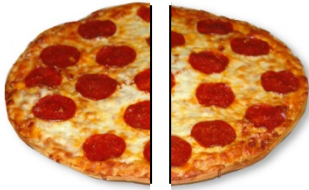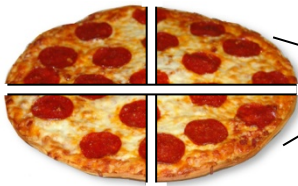
YES   NO!!!!
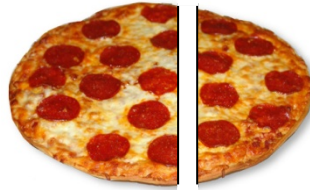
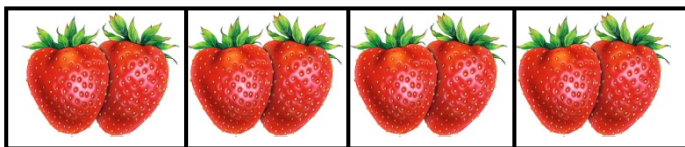10sweets ÷ 2 = 5sweets

OR $\frac{1}{2}$ of 10 = 10 ÷ 2 = 5

To work out a quarter

Split into four equal parts

$$\frac{2}{4} = \frac{1}{2}$$

8 strawberries ÷ 4 = 2 strawberries

OR $\frac{1}{4}$ of 8 = 8 ÷ 4 = 2

METRIC units of length are:

Millimetre (mm)

↓

Centimetre (cm)

↓

Metre (m)

↓

Kilometre (km)

1cm = 10mm   2cm = 20mm   4.5cm = 45mm

1cm   2cm   3cm   4cm   5cm
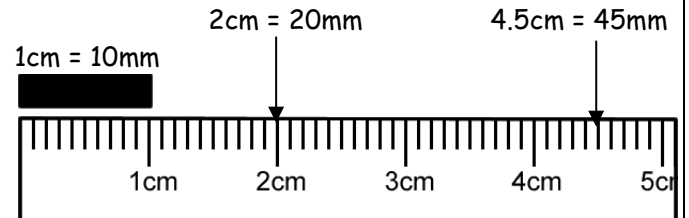
♦ A big stride is about a metre

♦ Distance to Dublin is measured in kilometres

Áth Cliath Km
DUBLIN 18

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**

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

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

24p + 32p
=20p + 4p + 30p + 2p
=20p + 30p + 4p + 2p
=50p + 6p
=56p

To find change from £1

Subtraction method	Add-on method
£1 – 56p	56p + 4p = 60p
= £1 – 50p – 6p	60p + 40p = £1
	= 4p + 40p
= 50p – 6p	= 44p
= 44p	

18 Compare units of measure

Think of the units of mass then order:
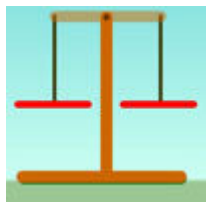
a bar of chocolate
your teacher
a blown-up balloon
a loaf of bread

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 ½ 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

21 Sequence of time

Smallest

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

Largest

22 Write time

My Clock

o'clock
five past
five to
ten to
ten past
quarter to
quarter past
twenty to
twenty past
twenty five to
twenty five past
half past

ww.communication4all.co.uk

The time shown is:

5 past 6   OR   6:05

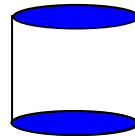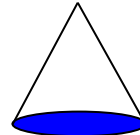**corner**   **edge**   **face**
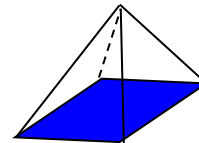
25 2D shapes on 3D shapes

6 faces – all rectangles
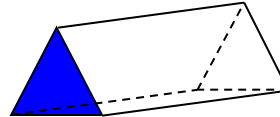
5 faces – 2 triangles
- 3 rectangles

3 faces – 2 circles
- 1 curved surface

2 faces – 1 circle
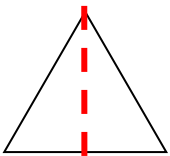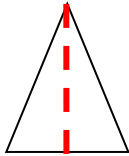- 1 curved surface

5 faces – 1 rectangle
- 4 triangles

23 2D shapes

♦ 3 sides – Triangles

A vertical line of symmetry

equilateral   isosceles

♦ 4 sides - Quadrilaterals
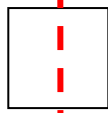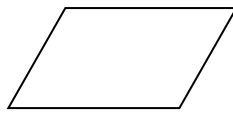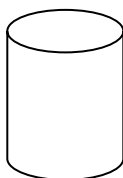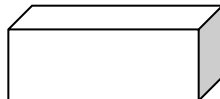
rectangle   square   parallelogram
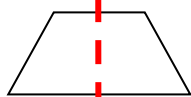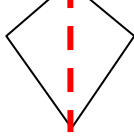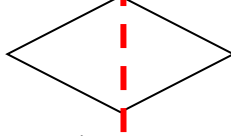
trapezium   kite   rhombus
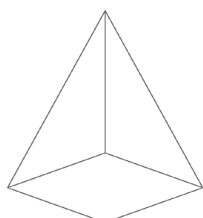
24 3D shapes
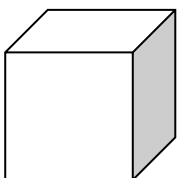
cube   cylinder   cuboid
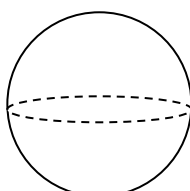
pyramid   ̄ere

26 To sort 2D shapes and 3D shapes
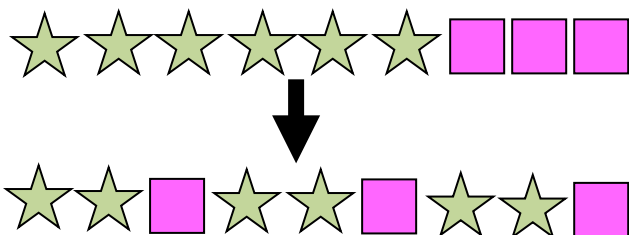
rectangles	not rectangles
red	
not red	

Carroll diagram

Has one or more flat faces   Can Roll

Venn diagram

27
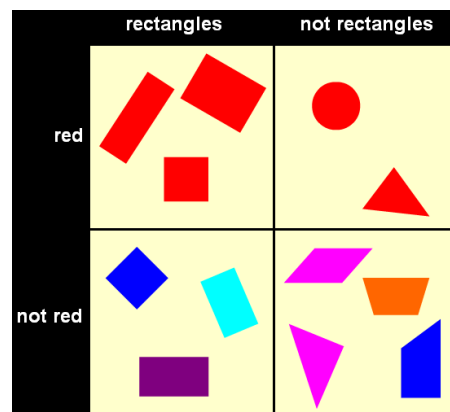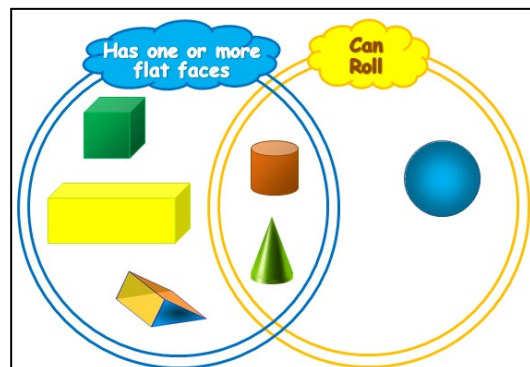
Sequence of shapes
Make these shapes into a pattern

Tally chart showing animals in the zoo

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

Block graph to show animals in the zoo
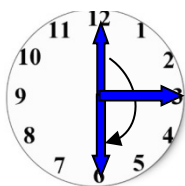

28 Describe position, direction & movement

LEFT   RIGHT

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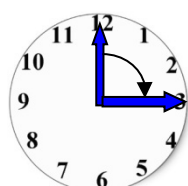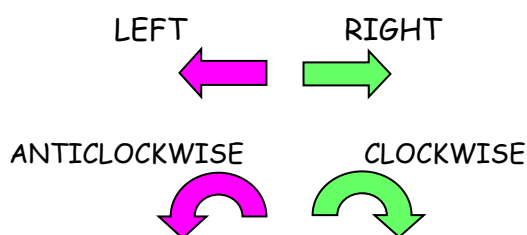
Clockwise (1 right angle) or $\frac{1}{4}$ turn
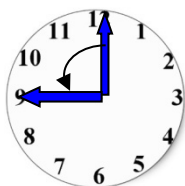
Anticlockwise(1 right angle) or $\frac{1}{4}$ turn

Half turn (2 right angles)

29 Tables and graphs
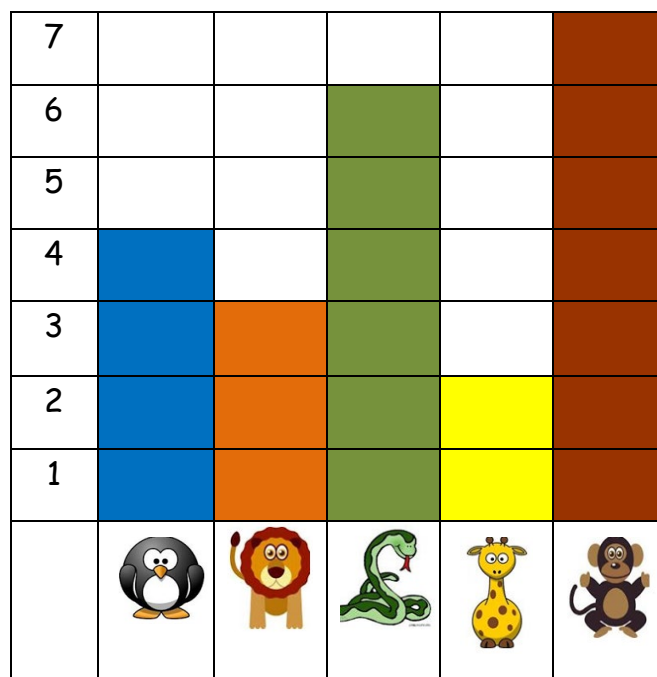
Pictogram of
Year 2 favourite fruits

Apple

Banana

Grape

Orange

30 Questions about tables and graphs

Example:
Questions about 'Animals in the zoo'

1. How many animals are there altogether?

4+3+6+2+7=22

2. How many more monkeys are there than lions?

7-3=4

3. What animal is there least of?

giraffe