

# Band 2 Knowledge Organiser

## 2/1 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

## 2/2 Place value

tens	ones
2	8

28 means 2 tens and 8 ones  
20 and 8

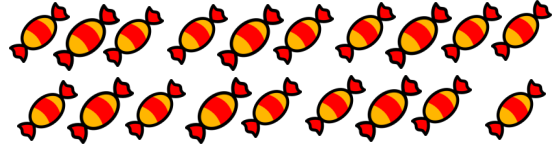
## 2/3 Estimate numbers

- Eyeball estimate



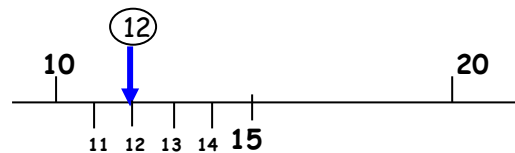
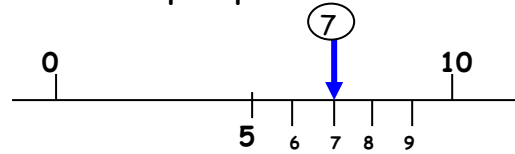
Here are 3

## 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



## 2/4 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 units and compare

Order is: 76 62 37 32

## 2/4 (continued) Comparing symbols



We say: 9 is bigger than 5

We write: 9 > 5

We say: 5 is smaller than 9

We write: 5 < 9

## 2/5 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

## 2/6 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?

## 2/7 Addition facts to 10

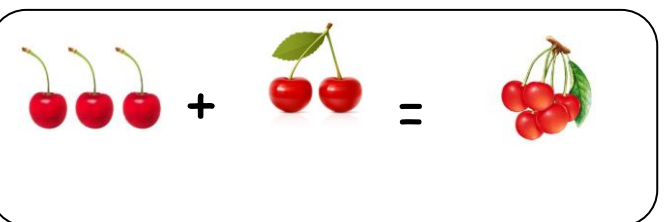
●	●	●	●	●	●	●	●	●	10
1	●	●	●	●	●	●	●	●	9
●	2	●	●	●	●	●	●	●	8
●	●	3	●	●	●	●	●	●	7
●	●	●	4	●	●	●	●	●	6
●	●	●	●	5	●	●	●	●	5
●	●	●	●	●	6	●	●	●	4
●	●	●	●	●	●	7	●	●	3
●	●	●	●	●	●	●	8	●	2
●	●	●	●	●	●	●	●	9	1

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



$$3 + 2 = 5$$

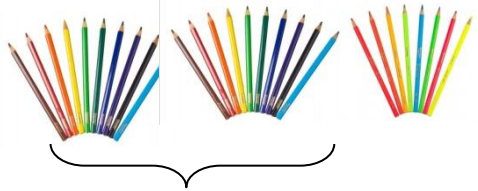


$$5 - 2 = 3$$

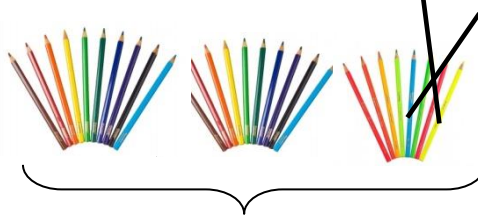


$$5 - 3 = 2$$

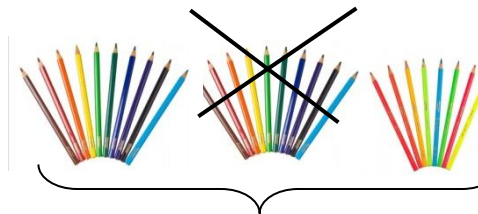
### 2/8 Add & subtract



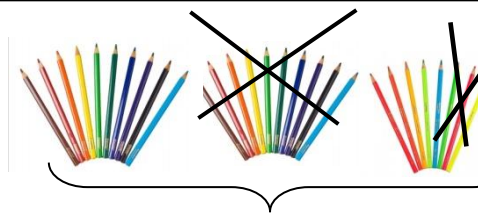
$20 + 8 = 28$



$28 - 3 = 25$




$28 - 10 = 18$



$28 - 13 = 15$

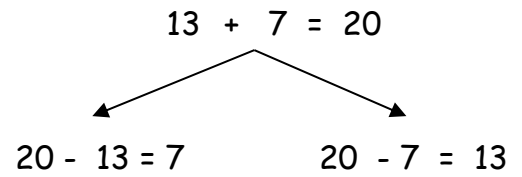
### 2/9 Add & subtract

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

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

### 2/10 Add & subtract

Fact family for add and subtract



### 2/11 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

### 2/12 Multiply & divide

#### Words for MULTIPLY

times

product

double

triple

#### Words for DIVIDE

share

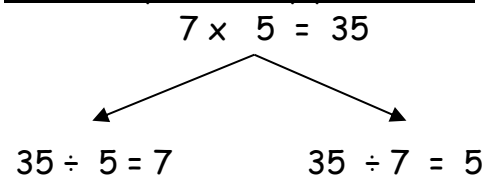
split

#### Words for EQUALS

is

gives

Fact family for multiply and divide



## 2/13 Multiply & divide

$7 \times 5 = 35$  is the same as  $5 \times 7$



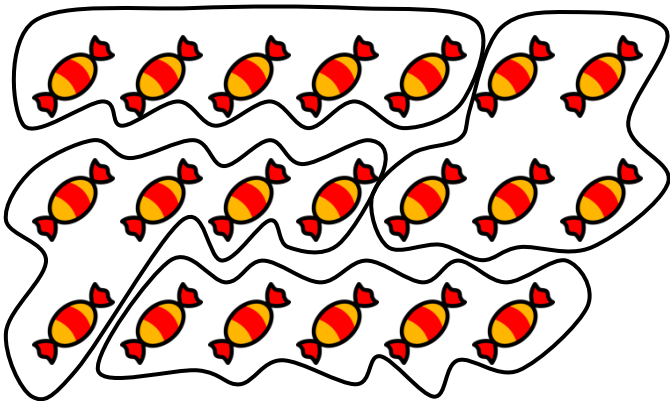
$35 \div 7 = 5$  is NOT the same as  $7 \div 35$



## 2/14 Multiply & divide

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

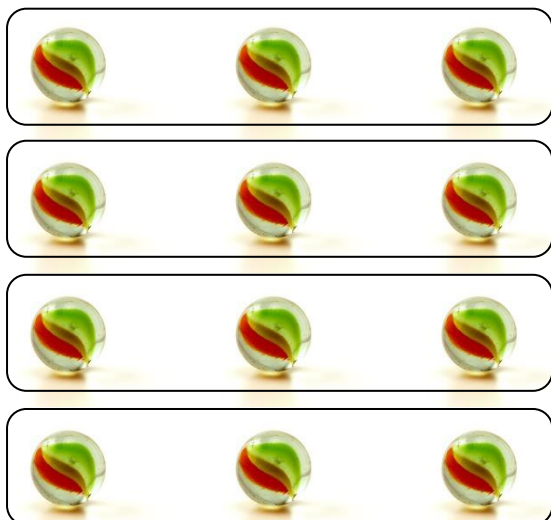
Divide them up into groups of 5 sweets-like this



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

$$15 - 5 - 5 - 5 = 0$$

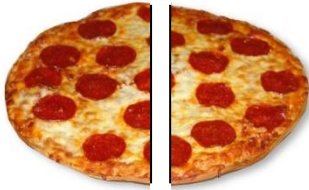
This is the same as  $15 \div 5 = 3$   
Because 5 has been subtracted 3  
times to get to 0

## 2/15 & 16 Fractions

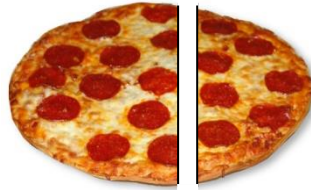
### To work out a half

Split into two equal parts

YES



NO!!!!

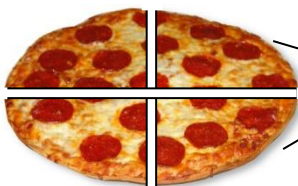


$$10 \text{ sweets} \div 2 = 5 \text{ sweets}$$

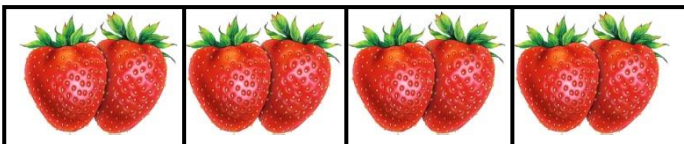
$$\text{OR } \frac{1}{2} \text{ of } 10 = 10 \div 2 = 5$$

### To work out a quarter

Split into four equal parts



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



$$8 \text{ strawberries} \div 4 = 2 \text{ strawberries}$$

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

## 2/17 Units of measure

### METRIC units of length are:

Millimetre (mm)



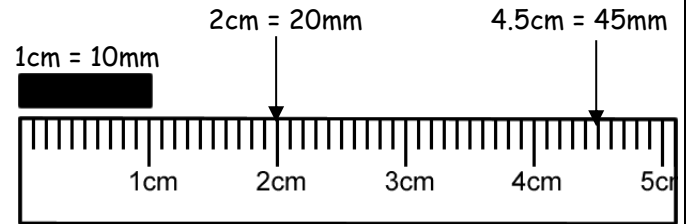
Centimetre (cm)



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)



$$1 \text{ kilogram(kg)} = 1000\text{grams(g)}$$

- ◆ An apple weighs 150grams



- ◆ Baby chimp weighs 3kg





## 2/17 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

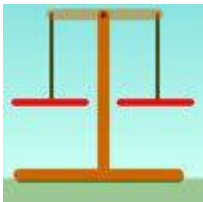


- ◆ Fuel for the car is measured in litres



## 2/18 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

## 2/19 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

## 2/20 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

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

### Add-on method

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

## 2/21 Sequence of time

Smallest



Largest

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

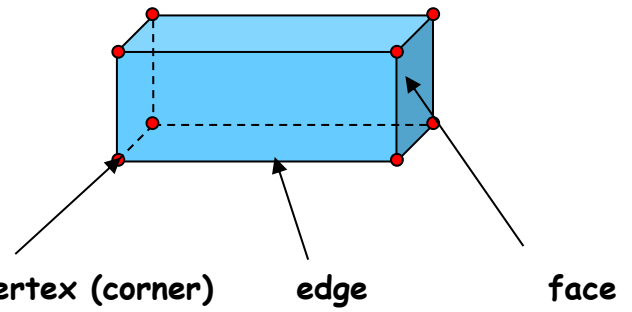
**2/22 Write time**

**My Clock**



The time shown is:

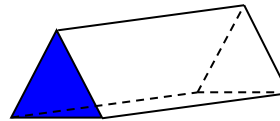
5 past 6 OR 6:05



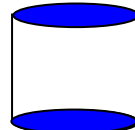
**2/25 2D shapes on 3D shapes**



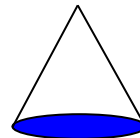
6 faces - all rectangles



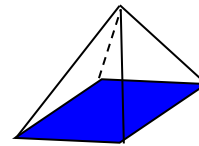
5 faces - 2 triangles  
- 3 rectangles



3 faces - 2 circles  
- 1 curved surface



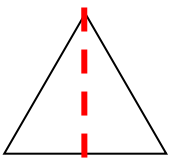
2 faces - 1 circle  
- 1 curved surface



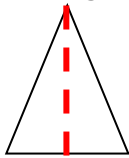
5 faces - 1 square  
- 4 triangles

**2/23 2D shapes**

◆ 3 sides - Triangles



equilateral



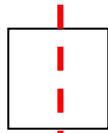
isosceles

A vertical line of symmetry

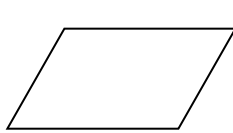
◆ 4 sides - Quadrilaterals



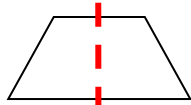
rectangle



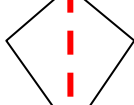
square



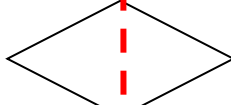
parallelogram



trapezium

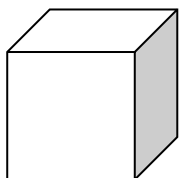


kite

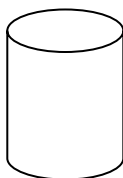


rhombus

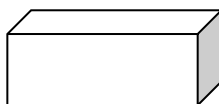
**2/24 3D shapes**



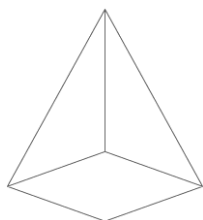
cube



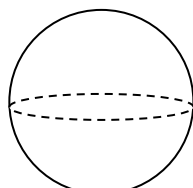
cylinder



cuboid

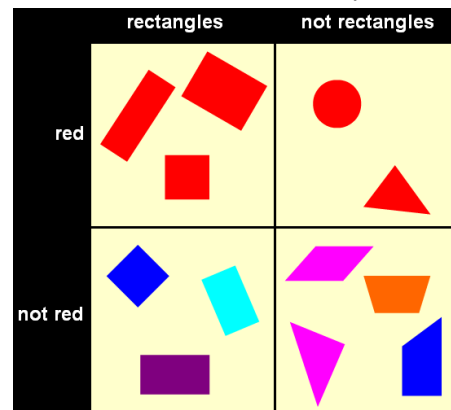


pyramid

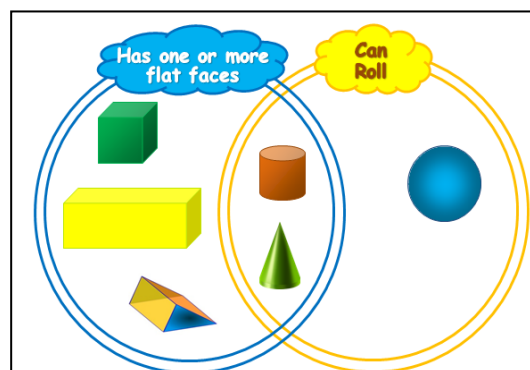


sphere

**2/26 To sort 2D shapes and 3D shapes**



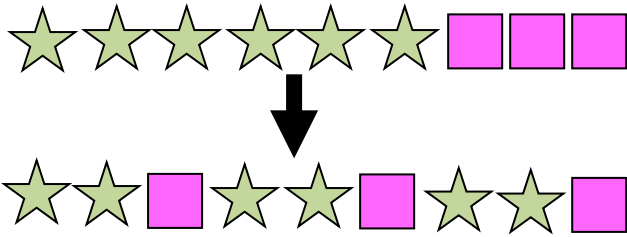
Carroll diagram



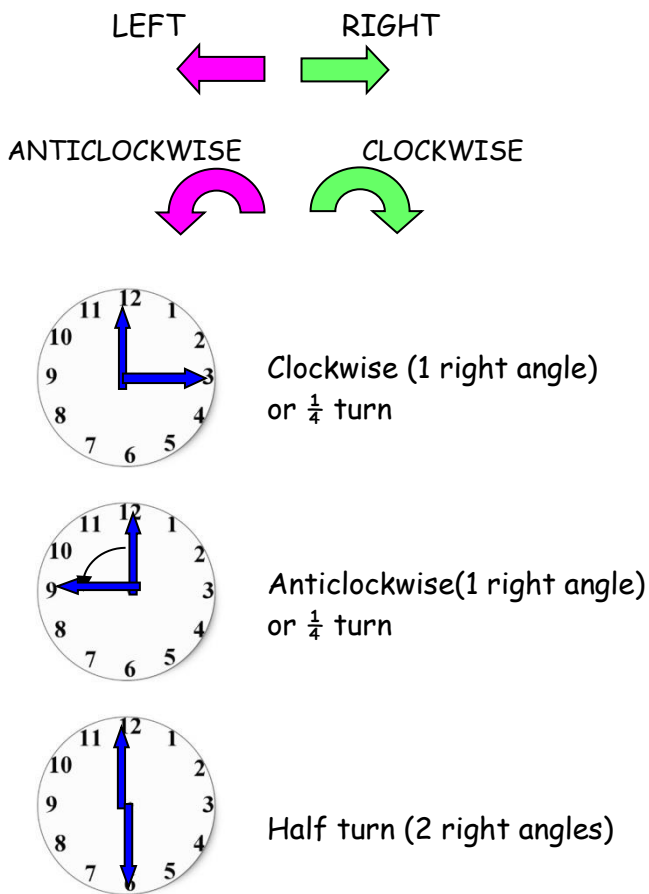
Venn diagram

### 2/27 Sequence of shapes

Make these shapes into a pattern

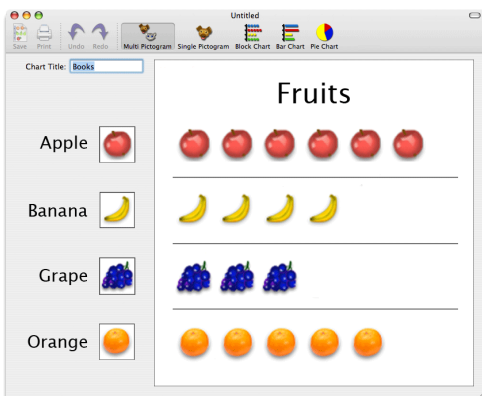


### 2/28 Describe position, direction & movement



### 2/29 Tables and graphs

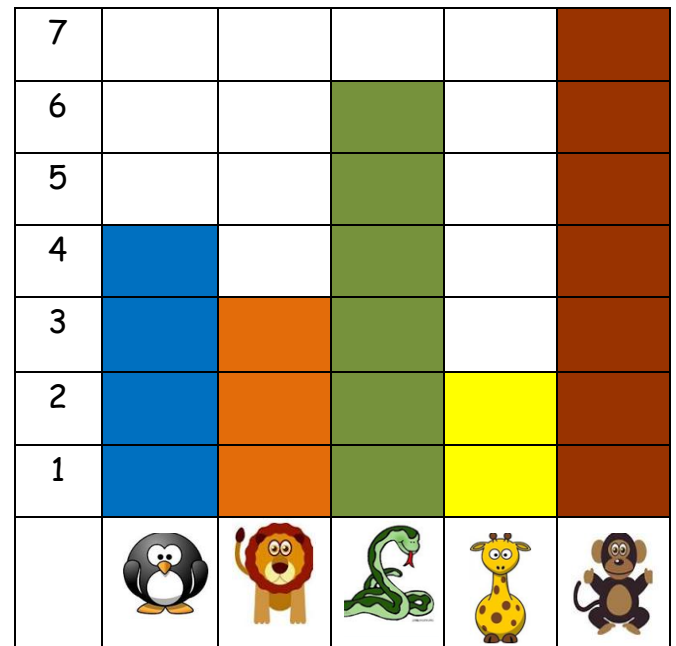
Pictogram of  
Year 2 favourite fruits



### Tally chart showing animals in the zoo

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

### Block graph to show animals in the zoo



### 2/30 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