

# Stage 3

## PROMPT sheet

### 3/1 Count in multiples

Now you must learn these multiples

Multiples of 4	Multiples of 8	Multiples of 50	Multiples of 100
0	0	0	0
4	8	50	100
8	16	100	200
12	24	150	300
16	32	200	400
20	40	250	500
24	48	300	600
28	56	350	700
32	64	400	800
36	72	450	900
40	80	500	1000

h	t	u
u	e	n
n	n	i
d	s	t
r		s
e		
d		
s		
3	5	2

- To find 10 more or 10 less, it is the 'tens digit' that changes  
10 more than 352 becomes 362  
10 less than 352 becomes 342

h	t	u
u	e	n
n	n	i
d	s	t
r		s
e		
d		
s		

3	5	2
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- To find 100 more or 100 less, it is the 'hundreds' digit that changes  
100 more than 352 becomes 452  
100 less than 352 becomes 252

### 3/2 Recognise place value

h	t	u
u	e	n
n	n	i
d	s	t
r		s
e		
d		
s		
3	5	2

352 means 300 + 50 + 2

### 3/3 Numbers in words and figures

In order to put FIGURES into WORDS, we must try to imagine that the number is in a PLACE VALUE table like this one

Hundred	Ten	Unit
1	4	7
One hundred	forty	seven
One hundred and forty-seven		

Hundred	Ten	Unit
4	0	9
Four hundred		nine
Four hundred and nine		

### 3/3 Compare and order numbers

- Write numbers lining up the digits

Hundred	Ten	Unit
1	4	7
6	3	2
1	7	6
1	6	2

- Begin at the hundreds and compare  
632 is the biggest



- Line up the digits in the correct columns

e.g. 327 - 119

H	T	U	
3	2	7	
1	1	9	-
2	0	8	<u>        </u>

### 3/8 Estimate answers to calculations

- Round off each number
- Then do the calculation
- Check using the inverse

Example: Estimate 83 - 28

$$80 - 30 = 50$$

$$\text{Inverse: } 50 + 30 = 80 \checkmark$$

### 3/9 Missing number problems

Fact family for +/-

$$34 + 23 = 57$$

$$57 - 23 = 34$$

$$23 + 34 = 57$$

$$57 - 34 = 23$$

### 3/10 Know the 3, 4 and 8 times tables

1	x	3	=	3
2	x	3	=	6
3	x	3	=	9
4	x	3	=	12

				<b>2</b>
5	x	3	=	5
				1
6	x	3	=	8
				2
7	x	3	=	1
				2
8	x	3	=	4
				2
9	x	3	=	7
1				3
0	x	3	=	0
1				
1				3
	x	3	=	3
1				3
2	x	3	=	6
<hr/>				
1	x	4	=	4
2	x	4	=	8
				1
3	x	4	=	2
				1
4	x	4	=	6
				2
5	x	4	=	0
				2
6	x	4	=	4
				2
7	x	4	=	8
				3
8	x	4	=	2
				3
9	x	4	=	6
1				4
0	x	4	=	0
1				4
1	x	4	=	4
1				4
2	x	4	=	8
<hr/>				
1	x	8	=	8
				1
2	x	8	=	6
				2
3	x	8	=	4
				3
4	x	8	=	2
				4
5	x	8	=	0
				4
6	x	8	=	8
				5
7	x	8	=	6
				6
8	x	8	=	4
9	x	8	=	7

1			2
0	x	8	8
1			0
1			8
1	x	8	8
1			9
2	x	8	6

### Fact family for $\times/\div$

$$9 \times 8 = 72$$

$$72 \div 9 = 8$$

$$8 \times 9 = 72$$

$$72 \div 8 = 9$$

### 3/11 Multiply & divide

- A 2-digit number by a single digit

Column method

$$\begin{array}{r} 38 \\ 3 \times \\ 114 \end{array}$$

2

Grid method

$$\begin{array}{r} 30 \quad 8 \\ 3 \quad 90 \quad 24 \end{array}$$

$$90 + 24 = \underline{114}$$

Partitioning method

$$\begin{aligned} 38 \times 3 \\ = 30 \times 3 + 8 \times 3 \\ = 90 + 24 \\ = 114 \end{aligned}$$

### 3/12 Multiply & divide

- Look for connections between two sums
- Remember the fact family for  $\times/\div$

$\times 10$

$$\text{Example: } 6 \times 4 = 24$$

$$\text{So } 60 \times 4 = 240$$

$$\text{So } 240 \div 4 = 60$$

$\times 2$

$$\text{Example: } 9 \times 8 = 72$$

$$\text{So } 18 \times 8 = 144$$

$$\text{So } 144 \div 8 = 18$$

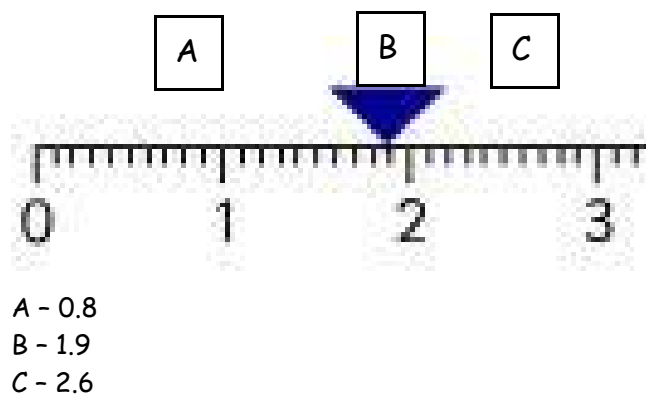
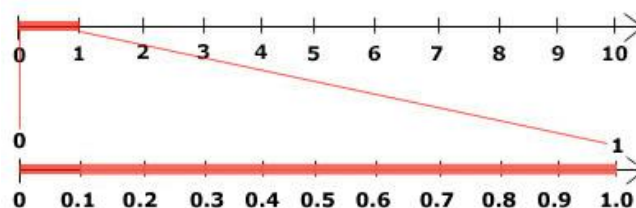
### 3/13 Tenths

t	u		t
e	n		e
n	i		n
s	t	•	t
	s		h
			s
8	2		6

- This represents 6 tenths =  $\frac{6}{10}$

### Counting in tenths (continued)

- A whole one divided into 10 equal parts
- $1 \div 10 = 1 \text{ tenth or } \frac{1}{10} \text{ Or } 0.1$



- To find a tenth of an object or quantity you divide by 10

**3/14 Write a fraction of a number of object**



$\frac{2}{5}$  are blue      and       $\frac{3}{5}$  are red

**3/15 Use fractions as numbers**

To find  $\frac{1}{5}$  of 20 we do  $20 \div 5 = 4$

To find  $\frac{2}{5}$  of 20 we do  $4 \times 2 = 8$

To find  $\frac{3}{5}$  of 20 we do  $4 \times 3 = 12$

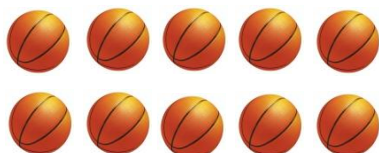
Example:  $\frac{1}{10}$  of 20 =  $20 \div 10 = 2$

### 3/14 Fraction of line or objects

- To find  $\frac{1}{5}$  of a line  
Divide the line into 5 equal parts

Each part is  $\frac{1}{5}$

- To find  $\frac{1}{5}$  of a set of objects  
Divide objects into 5 equal parts



Each part is  $\frac{1}{5}$

### 3/16 Equivalent fractions

- The same fraction can be expressed in different ways

ALL THESE ARE  $\frac{1}{2}$

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{8}{16}$$

ALL THESE ARE  $\frac{1}{4}$

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{6}{24}$$

### 3/17 Add & subtract fractions

- To add and subtract fractions

When the denominators are the same

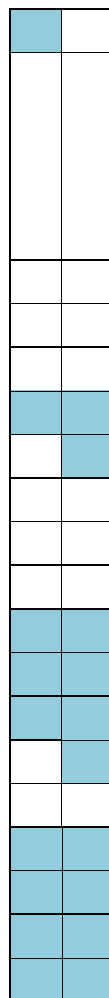
$$\frac{5}{7} + \frac{1}{7} = \frac{6}{7} \quad \text{Do not add}$$

$$\frac{5}{7} - \frac{1}{7} = \frac{4}{7} \quad \text{Do not subtract}$$

### 3/18 Compare fractions

- Fractions with the same denominator

$$\frac{1}{10} \quad \frac{3}{10} \quad \frac{7}{10} \quad \frac{9}{10}$$





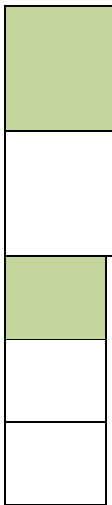
The bigger the numerator, the bigger the fraction

• **Unit Fractions**

$$\frac{1}{2}$$

$$\frac{1}{3}$$

$$\frac{1}{6}$$

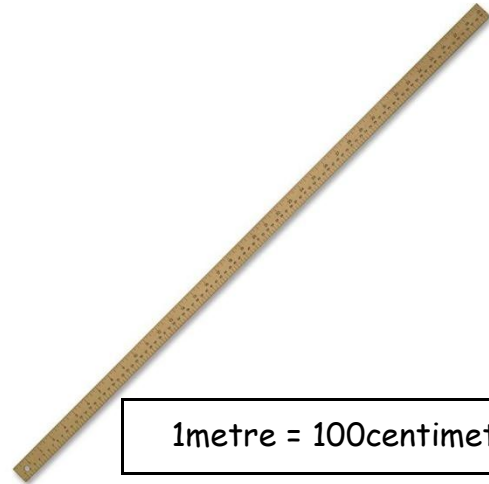


The bigger the denominator, the smaller the fraction

**3/19 Add & subtract measures**

- **The units must be the same**

Length - Example



1metre = 100centimetres

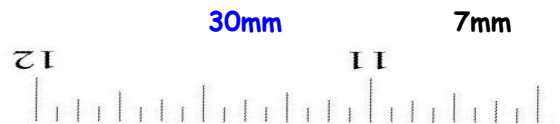
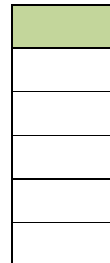


1centimetre = 10millimetres

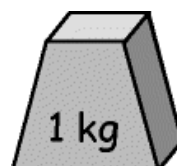
$$\begin{aligned} & 3\text{cm} + 7\text{mm} \\ &= 30\text{mm} + 7\text{mm} \\ &= 37\text{mm} \\ &\text{or } 3\text{cm } 7\text{mm or } 3.7\text{cm} \end{aligned}$$

3cm

0.7cm



Mass - Example



$$= 1000\text{g}$$



$$3\text{kg} - 450\text{g}$$

= 3000g - 450g  
 = 2550g  
 or 2kg 550g or 2.55kg

### 3/19 Add & subtract measures (continued)

#### Volume - Example

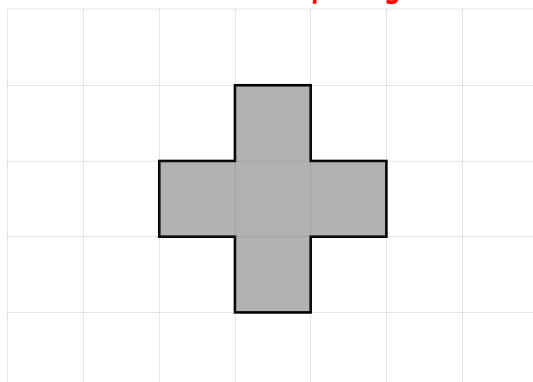


800ml + 720ml  
 = 1520ml  
 = 1 litre and 520ml  
 = 1.52 litres

### 3/20 Perimeter

PERIMETER is the distance round the outside of a shape

- On a centimetre square grid - count round



Perimeter of this shape = 12cm

- Measurements given - add up all round

4cm

4cm

6cm

Perimeter of this shape = 6 + 4 + 6 + 4 = 20cm

### 3/21 Bills and change

To work out a bill

1 chocolate bar - £1.10  
 1 pen - 10p  
 1 pencil - 8p  
 Total = £1.28

To find change by the 'add-on' method

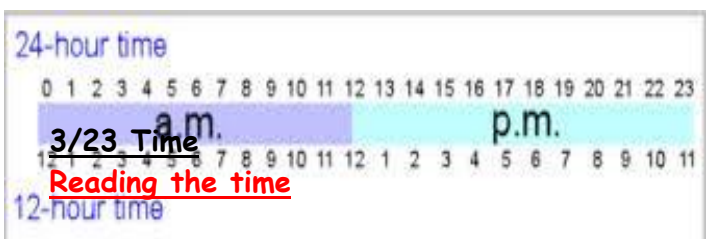
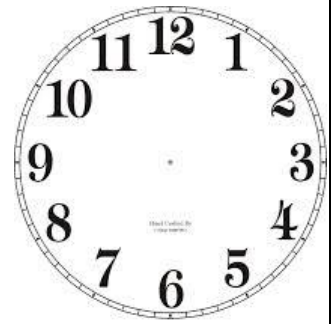
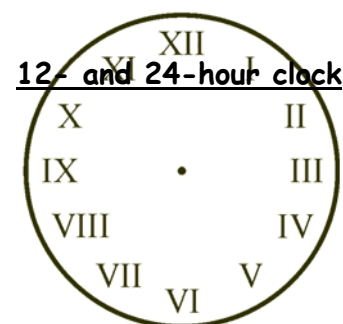
	+2p	+20p	+50p	= 72p
£1.28	£1.30	£1.50	£2.00	

### 3/22 Time

#### Analogue clock

Roman

Hindu-Arabic



### 3/23 Time

#### Reading the time



## My Clock



5 minutes between each number-  
so this time is 1:27 or we say 27  
minutes past 1

## Times of the day in 12-hour clock

Morning	Afternoon
12.00 midnight	12.00 noon
1.00 am	1.00 pm
2.00 am	2.00 pm
3.00 am	3.00 pm
4.00 am	4.00 pm
5.00 am	5.00 pm
6.00 am	6.00 pm
7.00 am	7.00 pm
8.00 am	8.00 pm
9.00 am	9.00 pm
10.00 am	10.00 pm
11.00 am	11.00 pm
12.00 noon	12.00 midnight

## 3/24 Time - hours minutes, seconds

hours  $\times 60$   
min  $\times 60$   
sec  $\div 60$   
sec  $\div 60$

## Months of the year

A rhyme to remember the days in each month

One Year  
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

30 days has September  
April, June and November.  
All the rest have 31  
Except February alone,  
Which has 28 days clear  
And 29 in each leap year.

- the "knuckle method"

A knuckle is "31 days", and in between each knuckle



365 days in a year  
366 days in a leap year



### 3/25 - 2D Shapes

- With 3 sides (Triangles)

right-angled      isosceles      equilateral      scalene

- With 4 sides (Quadrilaterals)

square      rectangle      parallelogram      trapezium      rhombus

- With 5 sides (Pentagons)

With 6 sides (Hexagons)

regular      irregular      regular      irregular

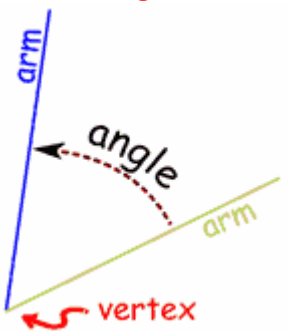
### 3/25 - 3D Shapes

Cube      cuboid      triangular prism      cylinder      sphere      cone      square-based Pyramid

– Nets

### 3/26 Angle

- An angle is an amount of turn



Triangle - 3 angles

Quadrilateral - 4 angles

Pentagon - 5 angles

- Angles in shapes

- Names of angles

FOUR right angles measure exactly  $360^\circ$   
This is called a full or complete turn

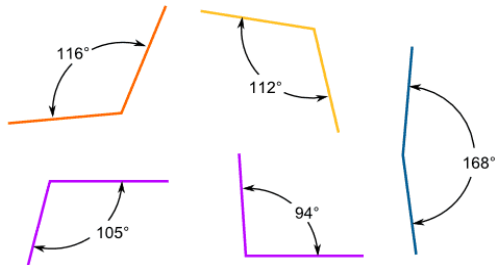
ACUTE angles are less than  $90^\circ$

RIGHT angles are exactly  $90^\circ$

A square for  $90^\circ$  angle

To check if an angle is bigger or smaller than a right angle, use a square corner

OBTUSE angles are bigger than  $90^\circ$



### 3/27 Right angles

ONE right angle measures exactly  $90^\circ$

This angle is greater

This angle is less

than a right angle

than a right angle

### 3/28 Types of Lines

TWO right angles measure exactly  $180^\circ$

This is called a half-turn



The Horizon is a horizontal line

THREE right angles measure exactly  $270^\circ$

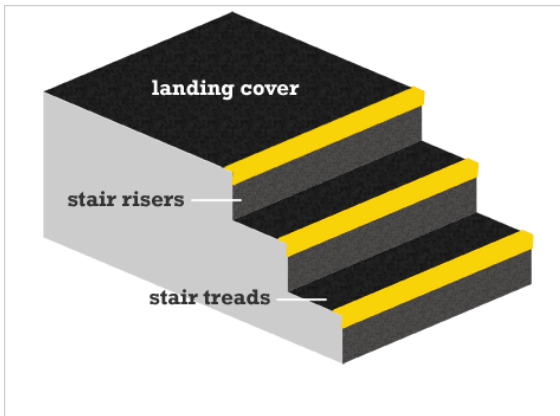
This is called three quarters of a turn



This cliff face is a vertical line



The running track is parallel lines (never meet)



The rise & tread are perpendicular lines (meet at 90°)

### 3/29 Bar charts

Frequency table to show pets owned by Year 3










Type of pet	Tally	Number of pets
Dog	IIII	5
Cat	III	3
Rabbit	IIII	4
Fish	IIII III	8
Hamster	II	2

A bar graph to show pets owned by Year 3

Number of

Type of pet

Pictogram to show the colours in a tube of Smarties

Colour	Number of Smarties	Frequency
Green		7
Orange		8
Blue		5
Pink		6
Yellow		11
Red		8
Purple		7
Brown		3
	Key  = 2 smarties	

### 3/30 Solve answers to questions

#### • Bar chart in 3/29

- (i) How many more children own a rabbit than a hamster?

Answer:  $4 - 2 = 2$

- (ii) What is the difference between the number of children who own a dog and the number of children who own a cat?

Answer:  $5 - 3 = 2$

- (iii) How many pets are owned altogether by the children Year 3?

$$\text{Answer: } 5 + 3 + 4 + 8 + 2 = 22$$

- **Pictogram in 3/29**

- (i) How many fewer blue smarties are there than yellow ones?

$$\text{Answer: } 11 - 5 = 6$$

- (ii) Work out the total number of smarties in the tube

$$\text{Answer: } 55$$