

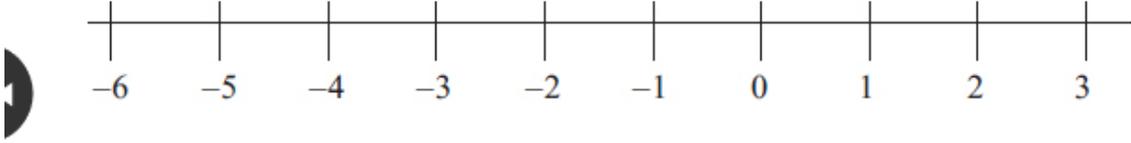
# ISLEWORTH & SYON BOYS SCHOOL

YEAR 7 - LEVEL 1 NUMBER & MEASURE

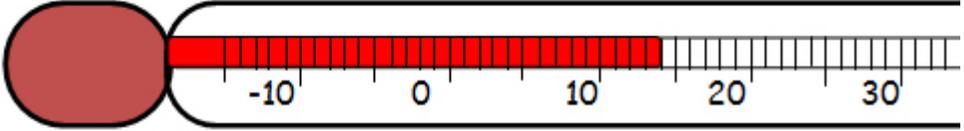
PERSONAL  
LEARNING  
CHECKLIST





Skill	Example question	Can I do it?	I CAN do it now!
<b>Number size and rounding</b>			
Read, write, order and compare positive integers up to 1000	<p>(a) Write these numbers in order of size. Start with the smallest number.</p> <p style="text-align: center;">47   9   72   33   80   16</p> <p>(a) Write the number 675 in words.</p>		
Multiply and divide positive integers by 10, 100 and 1000	(a) Work out $25 \times 100$		
Know multiplication and division facts up to $10 \times 10$	(b) Work out $72 \div 9$		
Round positive integers to the nearest 10, 100 and 1000	(c) Write the number 678 to the nearest ten.		
<b>Integers and the 4-rules</b>			
Add and subtract positive integers	<p>(a) Work out <math>643 + 68 + 214</math></p> <p>(b) Work out <math>307 - 78</math></p>		
Multiply and divide by positive integers (single digit multiplier and divisor for non-calculator section)	(d) Work out $224 \div 8$		
Understand negative numbers and use a number line to order, add and subtract negative numbers	<p>Here is a number line.</p>  <p>(a) Work out <math>-3 + 5</math></p>		

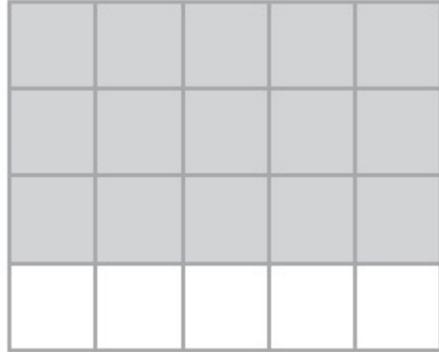
Round decimals to one decimal place and the nearest integer, and round money in calculations to the nearest penny	(b) Write 5.7263 correct to one decimal place.		
Check solutions to questions and problems by considering whether the answer is sensible	<i>Why must the answer to the following be between 14 and 21?</i>  Work out the cost of 2.5 metres of curtain material at £7 per metre.		
Add, subtract, multiply and divide quantities of money (integers)	Nathan goes shopping and buys  a magazine for £3.75 two bags of sweets at 95p each three bottles of water at 81p each  He pays with a £10 note.  How much change should he get?		
<b>Decimals</b>			
Read, write, order and compare decimals up to two decimal places, and understand place value	(b) Write these numbers in order of size. Start with the smallest number.  4.5    5.4    0.45    0.54    0.04    5.01		
Add and subtract decimals up to two decimal places	Using your calculator, work out  (a) $7.85 + 6.2 - 9.36$		
Multiply decimals with up to two decimal places (single digit whole number multiplier for non-calculator section)	<i>Do you know the golden rule? Can you check your answers are sensible?</i> (b) $20.5 \times 2.75$		
Divide decimals with up to two decimal places, using a calculator	(a) Work out $1.32 \div 0.25$		
Round decimals to one decimal place and the nearest integer	Write 15.76263 to the nearest whole number.		

Reading scales			
Know and use units of measure for length, weight, angles, capacity, temperature, including metric and imperial units eg imperial units include miles, inches, feet, pounds, gallons and pints	(c) Write down a suitable unit of measure for (i) the length of a bus,  (ii) the amount of fuel in a car's fuel tank.		
Read integer scales	<div style="text-align: center;">  </div> (a) Write down the reading on the thermometer.		
Draw and measure lines and angles, accurate to the nearest cm and degree	<p><i>Can you give the length in mm and also in cm?</i></p> <div style="text-align: center;">  </div> (a) Measure the length of the line <i>AB</i> .  (b) At <i>A</i> , draw an angle of $37^\circ$		
Converting units			
Add and subtract units of measure	Add 3 metres 20 centimetres 4 metres 30 centimetres 80 centimetres		
Convert units of measure in the metric system	(a) Change 7.6 cm into mm.  (b) Change 1500 g into kg.		



## Fractions

Read, write, order and compare fractions and mixed numbers



(a) What fraction of this shape is shaded?

Here are some fractions.

$$\frac{1}{2} \quad \frac{2}{6} \quad \frac{3}{4} \quad \frac{2}{4} \quad \frac{4}{10}$$

(d) (i) Which of the fractions is the smallest?

Use equivalent fractions

Find an equivalent fraction to  $\frac{16}{24}$

Write fractions in their simplest form

(a) Write  $\frac{4}{10}$  in its simplest form.

Add and subtract simple fractions (with the same denominator, excluding mixed fractions)

(c) Work out  $\frac{7}{12} - \frac{2}{12}$

Multiply a fraction by a positive integer, and find a fraction of a whole number quantity (positive integers only)

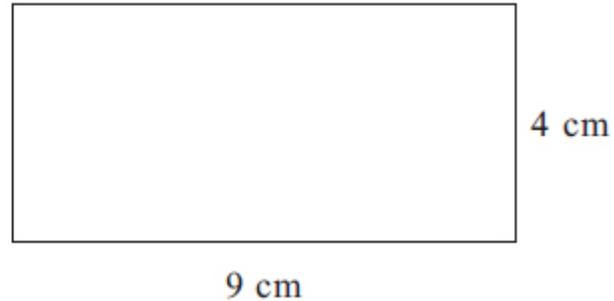
Work out  $\frac{3}{5}$  of 20

Fractions, decimals and percentages			
Convert simple fractions to decimals (up to 2 decimal places) and vice versa eg $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{1}{10}$ and multiples of these fractions	(a) Write $\frac{3}{4}$ as a decimal.  (c) Write 0.6 as a fraction.		
Read, write, order and compare simple percentages, eg 10%, 25%, 20%, 50% and 75%	(c) Write these percentages in order of size. Start with the smallest percentage.  75%    50%    95%    20%		
Use equivalencies between decimals, fractions and percentages eg $25\% = \frac{1}{4} = 0.25$	(b) Write these numbers in order of size. Start with the smallest number.  0.4    25%    0.75    60%  (b) Write 0.65 as a percentage.		
Percentages and applications			
Work out simple percentages of quantities, including VAT	Jess wants to buy a coat. The cost of the coat is £96 She pays a 15% deposit.  Work out 15% of £96  <i>How much does she still have to pay?</i>		
Add, subtract, multiply and divide quantities of money, household finance, utility bills, shopping bills, interest (for 1 year)	Nisha invests £500 for one year at 3% interest.  Work out 3% of £500.		

## Perimeter and area

Work out the perimeter of rectangles and shapes made from rectangles

Here is a rectangle.

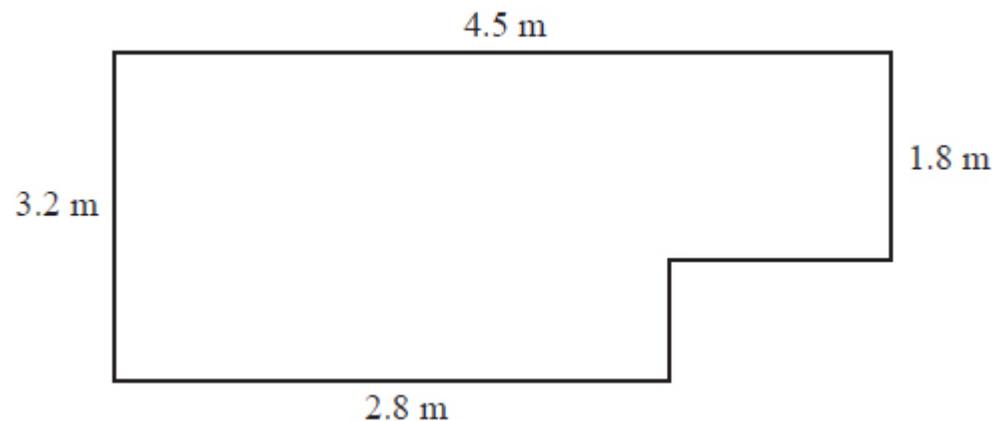


(a) Work out the perimeter of the rectangle.

*What units should we use?  
Why is the answer not 13?  
Why is the answer not 36?*

Work out the area of rectangles and shapes made from rectangles

Here is a shape made from rectangles.



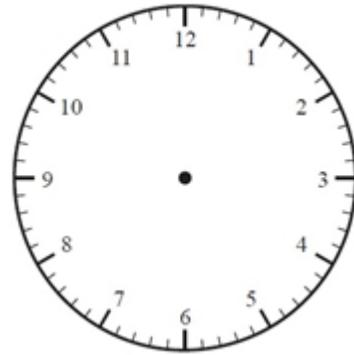
Work out the area of the shape.

*Hint - for these questions you need to split the shape up and work out two areas before adding them together. Often you will need to calculate a length you don't already know.*

## Time and timetables

Read, measure and record time using digital and analogue clocks in 12-hour and 24-hour format

(a) Draw hands on this clock to show a time of 8 20 am.



Work out intervals of time and convert between units of time

John arrived at work at ten to eight in the morning.  
He left work at 4 15 pm.

(b) How long did John spend at work?

Give your answer in hours and minutes.

(c) Change 480 seconds into minutes.

Read, measure and record events on calendars

March 2011						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19

(a) What day of the week is the 9th March?

(b) What is the date two weeks after the 19th March?

*You need to have a way of remembering how many days there are in each month.*

Read, construct and use everyday tables and charts, eg tables and timetables (bus, train and airlines).

Here is part of the train timetable from Sandbourne to Casterbridge.

Sandbourne to Casterbridge							
Sandbourne	05 30	06 30	07 17	08 00	08 55	10 26	11 26
Budmouth	05 49	06 49	07 36	08 19	09 14	10 45	11 45
Casterbridge	06 48	07 50	08 40	09 21	10 14	11 45	12 45

(b) How long does the 10 26 train take to get from Sandbourne to Casterbridge?

### Volume

Work out the volume of a cuboid

Work out the volume of this cuboid.

