Meadowburn Primary School

Second Level Maths Progression Guide

2.1 (P5)	2.2 (P6)	2.3 (P7)
Counting Counting in 6s, 7s, 9s, 25s and 1000s both forwards and backwards (including negative numbers). Complete these sequences: 9 0 -9 -18 ☐ ☐ 4000 3000 ☐ 1000 ☐ -1000 Start to recognise number patterns when counting in tenths or hundredths (decimals). Continue counting in hundredths: 1.57 1.58 ☐ ☐	**Counting** Count in powers of 10. Count forwards and backwards with positive and negative whole numbers, including through zero. One hundred = 10 x 10 = 10^2 One thousand = 10 x 10 x 10 = 10^3 How would you write one million? Continue the number sequence: 15 -10 -5 ☐ ☐	
Place Value Read, write, compare and order numbers up to ten thousand (knowing value of each digit). Order these numbers: 1423 1234 1324 1342 ☐ ☐ ☐ ☐ smallest largest Rou ;t whole number. Dwayne weighed out 2067 grams of sand on his weighing scales. To the nearest thousand, how many grams was this?	**Place Value** Read, write, compare and order 6-digit numbers (knowing value of each digit). Order these numbers: 328,164 328,614 328,416 ☐ ☐ ☐ smallest largest Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. What number do these Roman numerals represent? XXXIII = ☐ LXXVI = ☐	**Place Value** Rounds any number to a required degree of accuracy. Round these numbers to the nearest 1000000 6,937,246 → ☐ 36,976,899 → ☐ Use negative numbers in context and calculate intervals across zero (add and subtract). +32 and -7 difference = ☐

Addition and Subtraction

Add and subtract up to ten thousand with regrouping (using the column method).

Artek collected 3056 leaves into a recycling bin in the playground. The wind blew 178 leaves out of the bin. Artek then collected another 264 leaves into the bin.

How many leaves were in the bin then?

Add and subtract nearest multiple of ten, one hundred or one thousand and adjust.

Mr Print, the newsagent, has 56 newspapers to sell. He sells 37 newspapers to customers. Another 48 newspapers are delivered to the shop.

How many newspapers are in the shop now?

Addition and Subtraction

Add and subtract whole and decimal numbers of more than 4 digits with regrouping (using the column method).

Use formal written methods to complete:

8000 - 4680 =

806050 - 314783 =

Addition, Subtraction Multiplication and Division

Use knowledge of the order of operations to carry out calculations involving all four operations.

On a trip to the seaside, Year 6 collected 17 bags of shells, with 26 shells in each bag.

142 of the shells were broken and had to be thrown away. The rest were shared equally between Year 4, Year 5 and Year 6.

How many shells did Year 4 and Year 5 have altogether?

Multiply 4 digits by 2 digit numbers using long multiplication or grid method (up to 2 decimal places).

Use formal written methods to complete:

754 x 18

6429 x 68

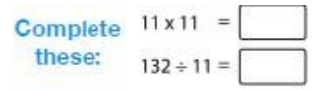
Mrs Murray, the sweet shop owner bought a big box of mini chocolate eggs. There were 8 layers in the box and each layer was 26 eggs long and 24 eggs wide.

How many chocolate eggs are there altogether?

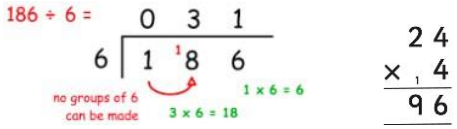
Divide a 4-digit number by a 2-digit number using long division (interpreting remainders).

Multiplication and Division

Rapid recall of multiplication and division facts to 12 x 10.



Use short multiplication and division methods.

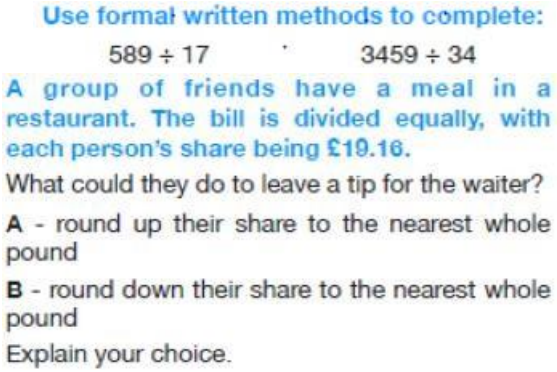


Multiplication and Division

Identify factors and multiples, finding all factor pairs and common factors.

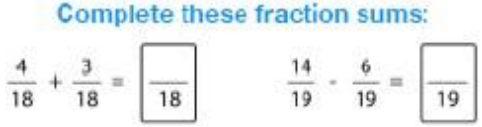
Solve multiplication and division word problems using factors, multiples, squares and cubes.

Know and use prime numbers, prime factors and nonprime numbers (composite numbers).

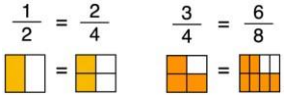


Fractions

Add and subtract fractions with the same denominator.

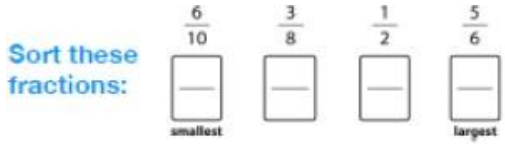


Recognise and show equivalent fractions.



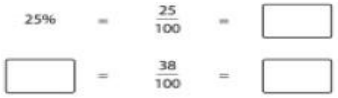
Fractions

Read, write and compare fractions and percentages.

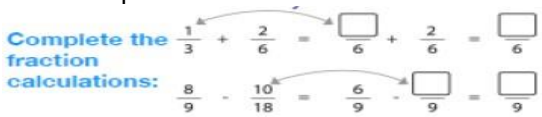


Know the percentage equivalent of:

$\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$

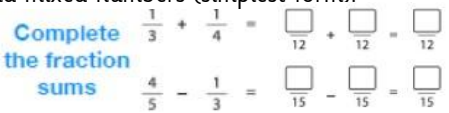


Add and subtract proper fractions with denominators that are multiples.



. Fractions

Add, subtract, multiply and divide fractions with different denominators and mixed numbers (simplest form).



Recognise equivalent fractions.

Multiply and divide by 10, 100 and 1000 up to 3 decimal places.

Calculate decimal fraction equivalents from simple fractions.

Ways to help your child:

Counting and place value -

- Count forwards and back in different intervals.
- Practise rounding up and down when weighing/measuring.
- Estimate before counting.

Addition, Subtraction, Multiplication and Division –

- Help them to have rapid recall of all times tables to complete more complex calculations.
- In the shops look at multipacks – ask questions like 'if we buy twelve packs of eight bags, how many will we have altogether?'

Measure

Convert between different units of measurement: m to cm, m to km, g to kg, ml t l.

In a can there is approximately _____ of lemonade.

Circle the best answer

30 litres 3 litres 0.3 litres

Ways to help your child:

Counting, Place Value, Addition, Subtraction, Multiplication and Division –

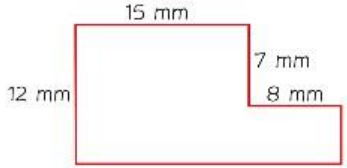
- Look out for Roman numerals on clocks and read the time.
- Read the Roman numeral dates at the end of BBC programmes.

  Take numbers and rearrange these into the biggest/smallest numbers that you can.
- Practise recall of prime numbers
- Give your child a number and ask them to give you all the factor pairs for that number.

Measure

Measure and calculate the perimeter and area of regular and irregular shapes using cm squared.

Calculate the perimeter



Ways to help your child:

Counting and place value –

- Help them to learn how to spell numbers and words which are maths vocabulary.
- Practise counting forwards and backwards in fours, eights and hundreds.
- Play 'Partitioning Power' – see how many different ways you can partition a number. Partition numbers - 242 = 200 + 40 + 2

Addition, Subtraction, Multiplication and Division –

- Help them to have rapid recall of the two, three, four, five, eight and ten times tables.
- Add numbers around you e.g., Bus no:242 (2 + 4 + 2) – whoever gets to 20 first is the winner.
- In the shops look at multipacks – ask questions like 'if we buy three packs of six bags, how many will we have altogether?'

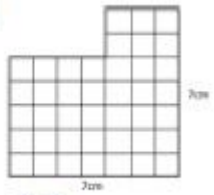
Measure

Use formula for area and volume of shape and calculate the volume cubes and cuboids (cm^2,m^2)

The formula for the area of a rectangle is A = l x w

(Area = length x width)

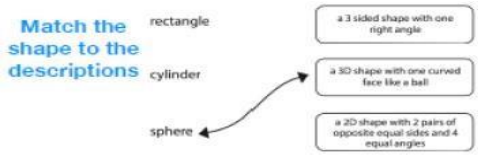
Which equation describes the area of the shape?



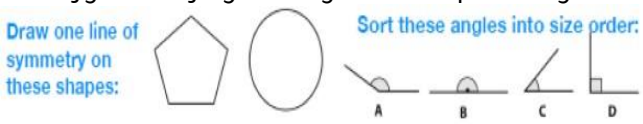
A = 9x7 A = (5x4) + (7x3) A = 7x7

Shape

Compare and classify shapes based on their properties.



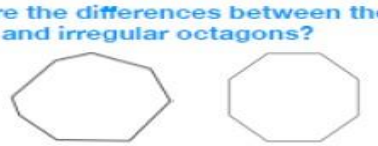
Identify lines of symmetry and compare angles.



Shape

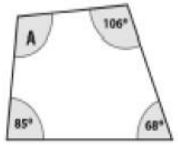
Draw given angles and measure them in degrees.

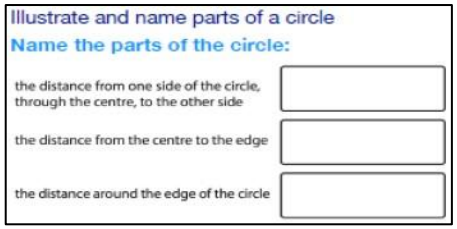
Distinguish between regular and irregular polygons



Shape

Calculate unknown angles in any triangle, quadrilateral and regular polygon.





Money

Add and subtract amounts of money to give change.

In one piggy bank, there was £8.72. In another piggy bank, there was £5.76.

How much money was in both piggy banks?

Money

Solve problems involving converting money and calculating change.

Bobby has saved £8.47 in his piggy bank. His brother, Sam, has saved 6 times as much.

How much more money does Sam have than Bobby?

Money

Solve multiple step word problems involving all four operations and convert between pence and pounds.

Here are 3 shopping receipts. Elizabeth rounds the price to the nearest 10.

What is Elizabeths total after rounding?

Time

Read, write and covert time between analogue and digital 12 and 24 hour clocks.

Time	Digital 12 hour clock time	Digital 24 hour clock time
quarter past 2 in the afternoon	2:15 pm	14:15
half past 8 in the morning		
twenty five past 11 in the morning		

Time

Solve time problems involving converting units of time, crossing from minutes to hours, involving days, weeks, months and years.

Lizzie started a sponsored walk at 10:20 am and finished at 4:30 pm.

How long did she walk for?

Convert the following units of time:

6 minutes = ____ seconds 6 years 4 months = ____ months 5 hours 40 minutes = ____ minutes

Time

Solve multiple step word problems involving all four operations and convert between hours and minutes.

Frank and Jane have both taken part in a triathlon. They were given their times for the different elements of the event and are trying to work out who was quickest.

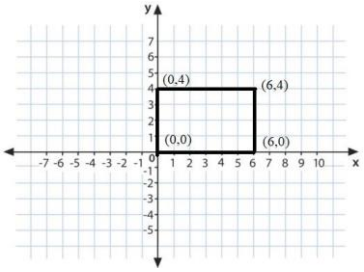
	Swim	Cycle	Run
Frank	35 minutes	1 and 1/2 hours	69 minutes
Jane	42 minutes	1 and 1/4 hours	65 minutes

If they both started at the same time, who finished first?

What was the difference in their total time?

Position and Direction

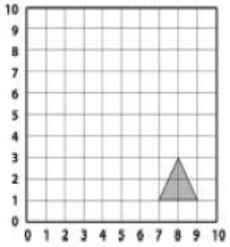
Find coordinates of shapes using x axis coordinate then y axis coordinate for each.



Position and Direction

Identify, describe and represent the position of a shape following a reflection or translation.

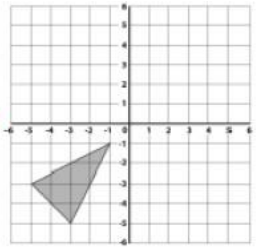
Translate this triangle 3 units left and 6 units up. Draw the new triangle location on the grid.



Position and Direction

Draw and translate simple shapes on the coordinate plane and reflect them in the axes.

Reflect the triangle into the first quadrant on the co-ordinate plane below.



Statistics

Solve comparison, sum and difference problems using information presented in bar chart, pictograms, tables and other graphs.

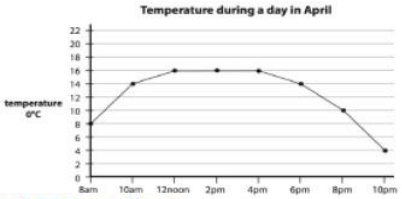
	Bus A	Bus B	Bus C
Amber Alley	08:30	08:45	09:00
Silver Street	09:05	09:20	09:35
Red Road	09:20	09:35	09:50

You need to meet your mum on Red Road by 9:40.

Which bus should you catch from Silver street?

Statistics

Complete, read and interpret information in tables, including timetables.



Read the graph and answer these questions:

What was the temperature at 3pm?

What do you think the temperature will be at midnight?

When was the sharpest rise in the temperature?

Statistics

Calculate and interpret the mean as an average

Look at the table below showing Laura's scores in her maths tests over 5 weeks.

Week	1	2	3	4	5
Score	26	32	30	10	32

What was Laura's average score over the 5 weeks?

Laura tried to work out her mean score without including week 4's score. Why do you think she did this?

Ways to help your child:

Money, Measurement and Time –

- Cook with your children, get them involved in weighing out food and looking at weights and capacities on packaging. Discuss symbols (g, kg, l, ml).
- Whenever you are using coins/notes, talk to your child about their value. Discuss prices in shops and compare them.
- Look at the clock with your child at different times of the day.
- Talk about where the hands are pointing and what time it is.

Ways to help your child:

Money, Measurement and Time –

- Cook with your children, get them involved in weighing out food and looking at weights and capacities on packaging. Discuss symbols (g, kg, l, ml). Compare weights – which is heavier/lighter?
- Talk to your child about the value of coins and notes. Discuss prices in shops and compare them. Add prices together.
- Look at the clock with your child at different times of the day.

Ways to help your child:

Money, Measurement and Time –

- Cook with your children, get them involved in weighing out food and looking at weights and capacities on packaging. Discuss symbols (g, kg, l, ml) and how much of the ingredients are need for double the quantity.
- Help them pay in shops and check change.
- Help your child to read the time on different clocks – digital and analogue.
- Set timers for cooking food.

Position and Direction - • Discuss directions home, which way are you turning, how many turns (right, left, clockwise and anti-clockwise). • Look out for shapes everywhere you go. What shapes can you see? Can you guess the shape being described? • Play games with objects, getting your child to describe its position.	• Talk about where the hands are pointing and what time it is. **Position, Direction and Statistics -** • Let your child programme you to move around an obstacle course at home – using directional language. • Look out for shapes everywhere. What shapes can you see? Can you describe them? • Play games with objects, getting your child to describe its position. • Tally the colour of the vehicles passing outside. • Discuss the data. What have they found out?	**Position, Direction and Statistics -** • Look at weather tables and graphs online and discuss the data. • Read sports tables – can they create graphs to represent team results?