

20

On Saturday Lara read $\frac{2}{5}$ of her book.



On Sunday she read the **other** 90 pages to finish the book.

How many pages are there in Lara's book?

Show
your
method

pages

Ovingham Middle School

Maths and the new curriculum



By the end of the session.....

- * Understand the background to the recent changes to the new national curriculum in maths.
- * Understand what your child is expected to know at the end of their year group.
- * Understand how we teach maths at Ovingham Middle School.
- * Know about the different calculation methods

By the end of the session.....

- * And.....
- * Know the types of questions children have to answer in national assessment tests – and try some!!
- * Know how you can help your child achieve even better by helping at home.



Principles underlying Curriculum 2014 in maths



- * Raising attainment and heightening expectations. – benchmarked against age related expectations in other ‘high performing’ nations.
- * Deeper learning rather than superficial learning
- * Removal of levels to help this. Children's achievement will be measured as entering, developing, securing and mastering end of year expectations.
- * All children calculating with confidence.
- * More time on fewer topics.
- * Current Years 6 will be the first year groups to be assessed on the new curriculum.
- * Focus on Fluency, reasoning and solving problems.

New Maths Curriculum Expectations

What does your child need to know by the end of each
year group?

Fewer Things; Greater Depth

- * The new curriculum has been designed to ensure that teachers spend more time on fewer topics;
- * This should mean that ‘deep learning’ rather than ‘superficial learning’ takes place;
- * Children’s learning will be extended in depth within their own year group’s expectations rather than moving onto another year’s expectations;
- * Children need to achieve all their year group’s objectives in order to be at ‘expected’ level.

Higher Expectations

- * Although there are fewer objectives to cover in a year, many of these objectives are more difficult, with many being moved ‘down’ from a higher year group.
- * The expectation is that more time is spent on these objectives to ensure ‘deep learning’ takes place – this is based on the Singapore system of mathematics;
- * A full list of the new objectives can be found on the tables;
- * Examples of new content introduced at different year groups are as follows...

Year 1 Examples

- * 'Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (previously a Year 2 Objective);
- * Represent and use number bonds and related subtraction facts within 20 (previously a Year 2 objective);
- * Measure and begin to use volume (not in any previous primary curriculums);
- * Describe position, direction and movement, including three-quarter turns (previously a Year 2 objective).

Year 2 Examples

- * Recognise, find, name and write the fraction $\frac{1}{3}$ of a length, shape, set of objects or quantity (previously a Year 3 objective);
- * Estimate and measure temperature (in °C) - previously a Year 3 objective;
- * Tell and write the time to five minutes (previously a Year 3 objective).

Year 3 Examples

- * Count in multiples of 8 (previously a Year 4 objective);
- * Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction (previously a Year 4 objective);
- * Add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) – not in any previous primary curriculums;
- * Roman numerals from I to XII (not in any previous primary curriculums);
- * Measure the perimeter of simple 2-D shapes (previously Year 4);
- * Tell and write the time from an analogue clock, including am/pm, the 24hr clock and reading time to the nearest minute (from Y4).

Year 4 Examples

- * Recall all multiplication and division facts for multiplication tables up to 12×12 (previously a Year 5 objective, which was up to 10×10);
- * Count backwards through zero to include negative numbers (previously a Year 5 objective);
- * Read Roman numerals to 100 (I to C) – not in any previous primary curriculums;
- * Add and subtract fractions with the same denominator (not in any previous primary curriculums);
- * Round decimals with one decimal place to the nearest whole number (previously a Year 5 objective).

Year 5 Examples

- * Read Roman numerals to 1000 (M) and recognise years written in Roman numerals (not in any previous primary curriculums);
- * Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers; establish whether a number up to 100 is prime and recall prime numbers up to 19 (previously Y6);
- * Recognise cube numbers and the notation (3);
- * Multiply proper fractions and mixed numbers by whole numbers (not in any previous primary curriculums).

Year 6 Examples

- * Read, write, order and compare numbers up to 10 000 000 (not in any previous primary curriculums);
- * Multiple / divide 4 digits by a 2-digit number using the formal written methods (not in any previous primary curriculums);
- * Add and subtract fractions with different denominators and mixed numbers; multiply simple pairs of proper fractions; divide proper fractions by whole numbers (not in any previous primary curriculums);
- * Calculate the area of parallelograms; calculate, estimate and compare volumes of cubes and cuboids using standard units (cm^3/m^3) - not in any previous primary curriculums;
- * Illustrate and names parts of circles, including diameter, radius and circumference (not in any previous primary curriculums).

High Achievers

- * If your child is achieving well, rather than moving on to the following year group's work we will encourage more in-depth and investigative work to allow a greater mastery and understanding of concepts and ideas.
- * Pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems before any acceleration through new content.

Examples

6

Write the missing digits to make the addition correct.



$$\begin{array}{r} 1 \quad \square \quad 1 \\ + \quad \square \quad 1 \quad \square \\ \hline 9 \quad 0 \quad 0 \end{array}$$

Examples

Ben spent $\frac{2}{5}$ of his money on a CD.
The CD cost £10. How much money
did he have at first?




Examples

Odd one out

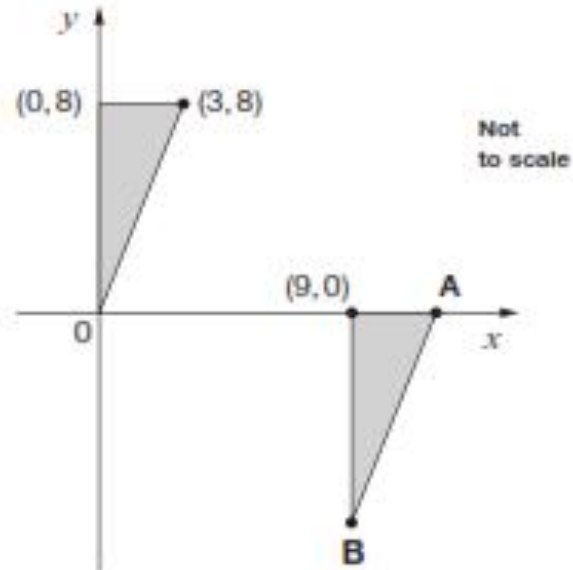
- Which is the odd one out? Why?

6, 15, 28, 36, 66

- 
- * Those pupils who are not sufficiently fluent with earlier material should consolidate their understanding , including through additional practice, before moving on.

20

Here are two **identical** shaded triangles on coordinate axes.



Write the coordinates of points A and B.

$$A = (\quad , \quad)$$

$$B = (\quad , \quad)$$

2 marks

Calculation Strategies

- * There are a variety of methods we have previously taught children to use when calculating, using the four arithmetic operations;
- * The emphasis now is ‘mastery’ and ‘fluency’ in one method for each operation...
- * A calculation policy has been developed across the partnership to ensure consistency between schools.

	2	3	4	8	1
+		1	3	6	2
<hr/>					
	2	4	8	4	3
<hr/>					
			1		

	2	3	3	6	1
		9	0	8	0
	5	9	7	7	0
+		1	3	0	0
<hr/>					
	9	3	5	1	1
<hr/>					
	2	1	2		

COLUMNAR ADDITION

Introduced at Year 3

	2	10	1 0	4	16
-		2	1	2	8
<hr/>					
	2	8	9	2	8
<hr/>					

	0	9	15	3	11	9
-		3	6	0	8	0
<hr/>						
	6	9	3	3	9	
<hr/>						

COLUMNAR SUBTRACTION

Introduced at Year 3

		3	2	7	
	x			4	
<hr/>					
	1	3	0	8	
<hr/>					
		1	2		

		1	8	
	x	1	3	
<hr/>				
		5	4	
	1	8	0	
<hr/>				
	2	3	4	
<hr/>				
	1			

			3	•	1	9	
	x		8				
<hr/>							
		2	5	•	5	2	
<hr/>							
			1	7			

MULTIPLICATION

‘Short’ introduced at Year 3

‘Long’ introduced at Year 6

3	6	9	7	2		
		3	6	0	(36 × 10)	
		5	1	2		
		3	6	0	(36 × 10)	
		1	5	2		
		1	8	0	(36 × 5)	
			7	2		
			7	2	(36 × 2)	
			0	0		

		0	8	1	2	.	1	2	5
8		6	64	9	17	.	10	20	40

DIVISION

‘Short’ introduced at Year 3

‘Long’ introduced at Year 6

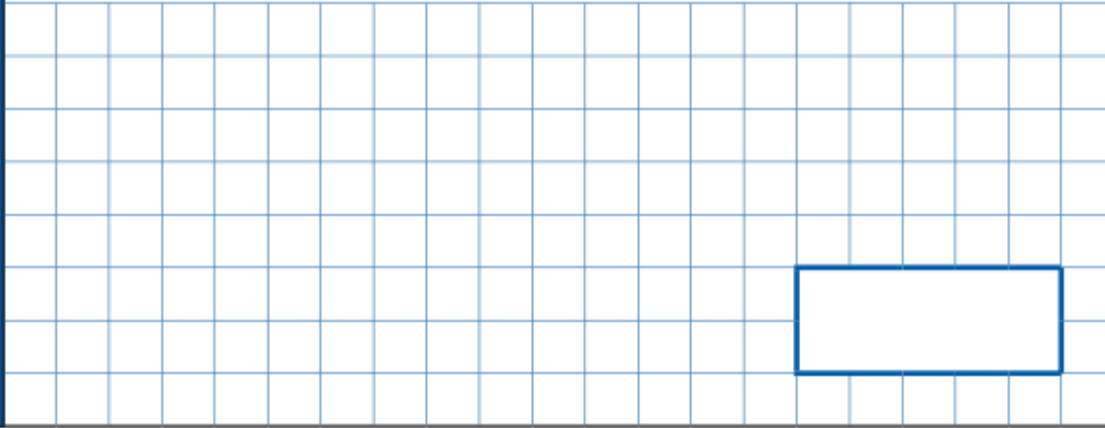
		0	6	6	3	r 5
8		5	53	50	29	

How You Can Help

- * Homework – Every Friday - Friday
- * ‘Real-life’ maths – counting money, telling the time, weighing ingredients, capacity, measuring objects;
- * Times tables (up to 12×12 by the end of Year 4) and associated division facts, e.g. $6 \times 7 = 42$, therefore $42 \div 7 = 6$, etc.;
- * Calculations
- * Websites – please take a leaflet which has a few suggestions of websites your child could use to support their maths.
- * Mymaths

36

$$\frac{3}{4} \div 2 =$$



1 mark

Thank you for coming and your
continued support.