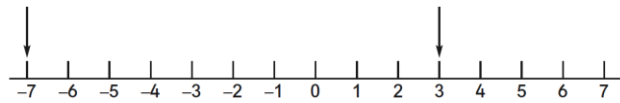
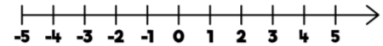




Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

Week.	Mathematical aspect	Non-negotiable end points Year 4.	Non-negotiable end points Year 5	Curriculum statements – Year 4.	Curriculum Statements. Year 5.																		
1.	Number and place value: positive and negative numbers, comparing, ordering and rounding	Knows the number system from zero into negative numbers. Knows a variety of representations and is fluent in the order and place value of numbers beyond 1000, including counting in tens and hundreds. Knows how to maintain fluency in other multiples.	Knows how to read and interpret negative numbers and find differences between negative and positive numbers.	<ul style="list-style-type: none"> ● To count backwards through zero to include negative numbers. ● To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). ● To identify, represent and estimate numbers using different representations. ● To order and compare numbers beyond 1000. ● To round any number to the nearest 10, 100 or 1000. ● To count in multiples of 6, 7, 9, 25, 1000. ● To find 1000 more or less than a given number. 	<ul style="list-style-type: none"> ● To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero. ● To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. ● To solve number problems and practical problems that involve all of the above. 																		
<p>Links to resources and policy documents:</p> <p>The temperature rises by 15 degrees from -4°C. What is the new temperature?</p> <p>The temperature in the freezer was -19°C. The temperature in the fridge was 3°C. What is the difference between the two temperatures?</p> <p>The lowest temperature ever recorded in UK was -26°C, the highest temperature ever recorded was 38°C. What is the difference between these temperatures?</p> <div style="border: 1px solid black; width: 30px; height: 20px; display: inline-block; text-align: center; vertical-align: middle;">°C</div> <p>Calculate the difference between the numbers shown by the two arrows.</p> 				<p>Use the number line to answer the questions.</p>  <ul style="list-style-type: none"> • What is 6 less than 4? • What is 5 more than -2? • What is the difference between 3 and -3? <p>Here are the temperatures in four cities at midnight and at midday.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Temperature</th> </tr> <tr> <th>City</th> <th>At midnight</th> <th>At midday</th> </tr> </thead> <tbody> <tr> <td>Paris</td> <td>-4°C</td> <td>-2°C</td> </tr> <tr> <td>Oslo</td> <td>-13°C</td> <td>-7°C</td> </tr> <tr> <td>Rome</td> <td>3°C</td> <td>10°C</td> </tr> <tr> <td>Warsaw</td> <td>-6°C</td> <td>2°C</td> </tr> </tbody> </table> <p>At midnight, how many degrees colder was Paris than Rome?</p> <div style="border: 1px solid black; width: 50px; height: 20px; display: inline-block; text-align: center; vertical-align: middle;">degrees</div> <p>Which city was 6 degrees colder at midnight than at midday?</p>		Temperature			City	At midnight	At midday	Paris	-4°C	-2°C	Oslo	-13°C	-7°C	Rome	3°C	10°C	Warsaw	-6°C	2°C
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2.	Addition and subtraction: Estimations and accuracy written methods	Knows how to check the accuracy of addition and subtraction calculations	Knows the formal written methods of columnar addition and subtraction with increasingly large numbers and decimals.	<ul style="list-style-type: none"> ● To add and subtract numbers with up to four digits using the efficient written methods of columnar addition and subtraction where appropriate. ● To estimate and use inverse operations to check answers to a calculation. ● To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. ● To estimate, compare and calculate different measures, including money in pounds and pence. 	<ul style="list-style-type: none"> ● To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction). ● To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. ● To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. ● To solve problems involving numbers up to three decimal places. 																		
<p>Links to resources and policy documents:</p>				<p>Starting with the number below, complete the calculations.</p>  <ul style="list-style-type: none"> • Add 3,000 • Subtract 50 • Add 200 <p>What is the final answer?</p>																			
<p>Links to resources and policy documents:</p>				<p>Calculate $718\,482 + 443\,628 + 53\,672$.</p> <p>Use rounding to the nearest ten thousand to find an estimated answer to: $56\,831 + 48\,832 + 31\,742 + 83\,184$</p>																			

Ensure pupils understand why and how to line up the decimal point when some numbers begin in a different column.

	1	7	3	4	3
+		4	5	8	6
	2	1	9	2	9

Add a zero to empty decimal places to aid understanding of place value.

0	9	1	3	1	
1	0	5	4	1	9 kg
-	3	6	0	8	0 kg
	6	9	3	3	9 kg

Work out the missing numbers.

	?	4	?	3	?
+	2	?	5	?	2
	7	8	5	2	9

$$\begin{array}{r} 3426 \\ +1715 \\ \hline 5141 \\ 11 \end{array}$$

The exchanged digits should be carried below the sum and crossed through when they have been added.

947 - 198 is best completed by taking away 200, then adjusting rather than a formal calculation.

$$5362 - 1436 = 3926$$

+64	+500	+3362	
1436	1500	2000	5362

Write down the four relationships you can see in the bar model.

2300	1240
3540	

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>

The 'Healthy Scrumptious Snacks' cafe has just opened. It is looking at how much money it made in sales of food and drinks in the first two months. It sold £9456 worth of food and £3567 worth of drinks in the first month. In the second month, it made £380 less from food sales and £650 less from drinks sales than in the first month. The cafe's target was to sell £26 500 worth of food and drinks in the first two months. How much more did they need to sell to meet their target?

	0	1	4		
-			5	0	
	4	5	2	9	7

This chart shows the vital statistics of some Roosters Football Club players.

Name	Height	Weight
Lanky	2.06 m	79.054 kg
Crusher	1.96 m	110.652 kg
Crumber	1.73 m	79.934 kg
Nugget	1.84 m	88.91 kg
Stomper	1.81 m	99.552 kg
Whale	2.01 m	118.236 kg
Twinkle Toes		65.789 kg

What is the difference in weight between Whale and Nugget?
How much taller is Lanky than Crumber?

3&4.	Multiplication and division: square and cube numbers written methods	Knows and applies table facts for recall of multiplication and division facts when calculating.	Knows the definition of square and cube numbers and the correct notation. Knows compact notation for long multiplication. Knows the compact algorithm for short division including remainders.	<ul style="list-style-type: none"> To recall multiplication facts for multiplication tables up to 12 x 12. To use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers. To multiply two-digit and three-digit numbers by a one-digit number using formal written layout. To solve problems involving multiplying and adding, including using the distributive law and harder multiplication problems such as which n objects are connected to m objects. 	<ul style="list-style-type: none"> To recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers. To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.
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Links to resources and policy documents:

Square numbers

A square number is a number multiplied by itself. This can also be called 'a number squared'. The symbol for squared is 2 .

Cube numbers

A cube number is a number multiplied by itself 3 times. This can also be called 'a number cubed'. The symbol for cubed is 3 .

Make the target number of 84 using three of the digits below.

7	5	3	4	6	2
---	---	---	---	---	---

$$\square \times \square \times \square = 84$$

Fill in the multiplication and division tables by working out the missing digits.

×		8	9	
12	24			
3			12	
	14			
			54	

×		7	6
	20	16	14
5	40		
			36
3	30		

$$35 \times 6 = 30 \times 6 + 5 \times 6$$

$$= 180 + 30$$

$$= 210$$

To multiply by 4: Double and then double again.

To multiply by 5: Multiply by 10 and then halve.

To multiply by 20: Multiply by 10 and then double.

To multiply by 9: Multiply by 10 and then adjust.

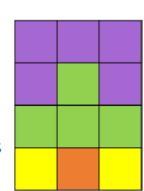
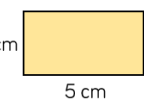
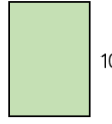
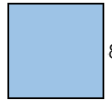


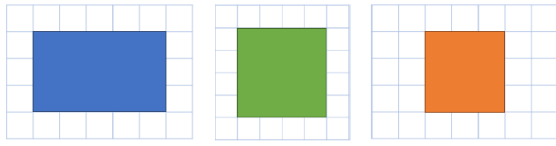
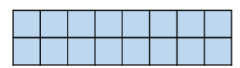
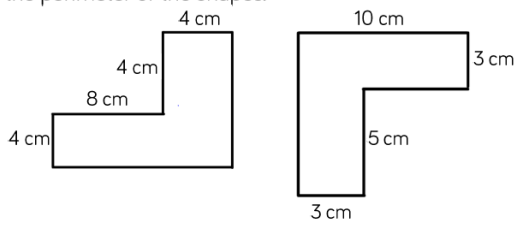
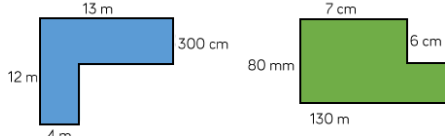
To multiply by 6: Multiply by 3 and then double.

Circle the square numbers.

1	49	66	17	36	9	144
	75	101	81	46	12	64
100	25	4	123	121		

Work out:

 $6^2 =$
 $3^3 =$
 4 squared =
 8 cubed =

<p>Write the following as a number sentence and then solve them:</p> <p>1) $2^2 =$ 2) $4^2 =$ 3) $5^2 =$ 4) $10^2 =$</p>		<p>Jess says,</p> <p>“7^2 is 14.”</p> <p>Do you agree? Explain your thinking.</p>		<p>Standard Algorithm for Multiplication</p> $\begin{array}{r} 34 \\ \times 28 \\ \hline 272 \\ + 680 \\ \hline 952 \end{array}$ <p>$186 \div 6 =$</p> $\begin{array}{r} 031 \\ 6 \overline{) 186} \\ \underline{6} \\ 18 \\ \underline{18} \\ 0 \end{array}$ <p>no groups of 6 can be made $3 \times 6 = 18$ $1 \times 6 = 6$</p>		<p>$5309 \div 8$</p> $\begin{array}{r} 0663 \text{ r } 5 \\ 8 \overline{) 5309} \end{array}$ <p>The remainder could be expressed as five eighths, $\frac{5}{8}$, as a decimal number, or rounded up or down as appropriate for the problem.</p> <table border="1" style="float: right; margin-left: 20px;"> <tr><td></td><td>2</td><td>1</td><td>9</td><td>0</td></tr> <tr><td>x</td><td></td><td></td><td>6</td><td>9</td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> </table>			2	1	9	0	x			6	9															
	2	1	9	0																												
x			6	9																												
5.	Measurement: Area and perimeter	Knows how to calculate the perimeter as the measurement of the boundary of a rectilinear figure. Knows the area is the measurement of the surface of a rectilinear figure.	Knows how to calculate the perimeter of rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths.	<ul style="list-style-type: none"> To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres To find the area of rectilinear shapes by counting squares. 	<ul style="list-style-type: none"> To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. To calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes. 																											
<p>Links to resources and policy documents:</p> <p>Here is a patchwork quilt. It is made from different coloured squares. Find the area of each colour.</p> <p>Purple = ___ squares Green = ___ squares Yellow = ___ squares Orange = ___ squares</p>  <p>Calculate the perimeter of the rectangles.</p> <p>2 cm  5 cm 10 cm  4 cm 8 cm  8 cm</p> <p>___ cm + ___ cm + ___ cm + ___ cm = ___ cm</p> <p>Which of the two shapes covers most surface?</p>   <p>How do you know?</p>				<p>Calculate the perimeter of the shapes.</p>  <p>Jack uses his times-tables to count the squares more efficiently.</p> <p>There are 4 squares in 1 row. There are 3 rows altogether. 3 rows of 4 squares = 12 squares</p> <p>Use Jack's method to find the area of this rectangle.</p> 		<p>Find the perimeter of the shapes.</p>  <p>Calculate the area.</p> 																										

Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

6.	Geometry; Describing and classifying shapes including angles	Knows how to identify acute and obtuse angles. Knows that two right angles form a straight line.	Knows that angles are measured using a protractor. Knows right, acute, obtuse, straight and reflex angles.	<ul style="list-style-type: none"> ● To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. ● To identify lines of symmetry in 2D shapes presented in different orientations. ● To complete a simple symmetric figure with respect to a specific line of symmetry. ● To identify acute and obtuse angles and compare and order angles up to two right angles by size. 	<ul style="list-style-type: none"> ● To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles ● To draw given angles and measure them in degrees ($^{\circ}$). <p>To identify:</p> <ul style="list-style-type: none"> ● angles at a point and one whole turn (total 360°) ● angles at a point on a straight line and 1/2 a turn (total 180°) ● other multiples of 90°.
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Links to resources and policy documents:

A right angle is ____ degrees.
Acute angles are ____ than a right angle.
Obtuse angles are ____ than a right angle.

Describe the angles as acute, obtuse or right angle.

Label the angles. O for obtuse, A for acute and R for right angle.

7.	Statistics: Solve problems from data Reading line graphs	Knows how to interpret and analyse graphs and charts to solve problems.	Knows which representations of data are most appropriate and why using a line graph.	<ul style="list-style-type: none"> ● To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ● To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs. 	<ul style="list-style-type: none"> ● To solve comparison, sum and difference problems using information presented in a line graph. ● To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers ● To solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes;
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Links to resources and policy documents:

The table shows average rainfall in Leicester over a year. Complete the graph using the information from the table.

Month	Rainfall (mm)
Jan	54
Feb	40
Mar	38
Apr	38
May	48
Jun	46
Jul	58
Aug	60
Sep	50
Oct	57
Nov	65
Dec	50

The table shows the usual rainfall in each month in mm for Sydney, Australia.

J	F	M	A	M	J	J	A	S	O	N	D
102	118	130	126	121	131	98	82	69	77	84	78

The table shows the seasons and months. Write some statements to match the information in both tables.

Summer	Dec, Jan, Feb
Autumn	Mar, Apr, May
Winter	June, July, Aug
Spring	Sep, Oct, Nov

The bar chart shows the number of nuts that pupils in the class ate last Saturday.

a) How many pupils ate more than 9 nuts? pupils

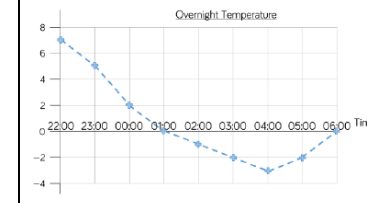
b) How many pupils ate fewer than 7 nuts? pupils

c) 2 pupils ate 1 nut. 5 pupils ate 2 nuts. No pupils ate 3 nuts. How many pupils ate no nuts? pupils

Here is a line graph showing the temperature in a garden.

What was the temperature at 5 p.m.?
What was the difference in temperature between 3 p.m. and 7 p.m.?
When was the temperature 4°C ?
Estimate the time when the temperature was 0°C .
Estimate the temperature at 6 p.m.

Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

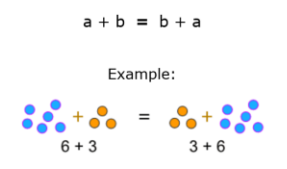


What was the highest/lowest temperature?
 What time did they occur?
 What is the difference between the highest and lowest temperature?
 How long did the temperature stay at freezing point or less?

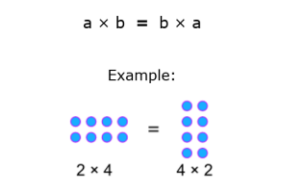
8.	All four operations: Factor pairs, laws of arithmetic.	Knows the efficient methods of calculating in all four operations. Knows how to find factor pairs. Knows the distributive law along with commutative and associative laws.	Knows the definition of square and cube numbers and the correct notation.	<ul style="list-style-type: none"> ● To estimate and use inverse operations to check answers to a calculation. ● To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. ● To recall multiplication and division facts for multiplication tables up to 12×12. ● To recognise and use factor pairs and commutativity in mental calculations. ● To solve problems involving multiplying and adding, including using the distributive law and harder multiplication problems such as which n objects are connected to m objects.
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Links to resources and policy documents:

The "Commutative Laws" say we can **swap numbers** over and still get the same answer ...
 ... when we **add**:

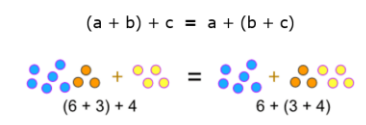


... or when we **multiply**:

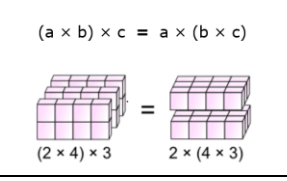


The "Associative Laws" say that it doesn't matter how we group the numbers (i.e. which we calculate first) ...

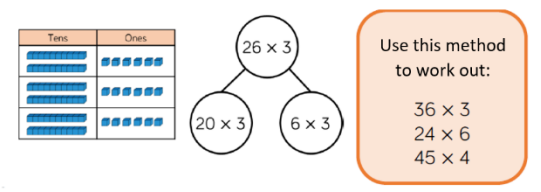
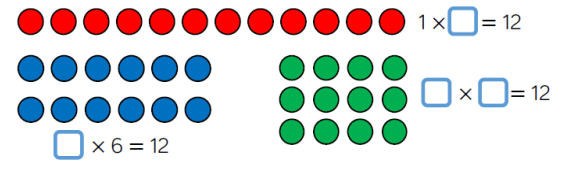
... when we **add**:



... or when we **multiply**:



Complete the factor pairs for 12



Use your knowledge of multiplication tables to complete these calculations.

$7 \times 6 =$	$12 \times 6 =$
$7 \times 2 \times 3 =$	$13 \times 6 =$
$8 \times 7 =$	$12 \times 12 =$
$2 \times 4 \times 7 =$	$12 \times 13 =$
$2 \times 2 \times 2 \times 7 =$	$12 \times 0 =$

Which calculations have the same answer? Can you explain why?

Square numbers

A square number is a number multiplied by itself. This can also be called 'a number squared'. The symbol for squared is 2 .

Cube numbers

A cube number is a number multiplied by itself 3 times. This can also be called 'a number cubed'. The symbol for cubed is 3 .

Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

9.	Fractions; Decimals	Knows how to write decimal equivalents of any number of tenths and hundredths	Knows decimal notation and the language associated with it for up to three decimal places.	<ul style="list-style-type: none"> ● To recognise and write decimal equivalents of any number of tenths or hundredths. ● To find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths. ● To round decimals with one decimal place to the nearest whole number. ● To compare numbers with the same number of decimal places up to two decimal places. 	<ul style="list-style-type: none"> ● To read, write, order and compare numbers with up to three decimal places. ● To round decimals with two decimal places to the nearest whole numbers and to one decimal place. ● To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents. ● To solve problems involving number up to three decimal places.
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Links to resources and policy documents:

Image	Words	Fraction	Decimals
	56 hundredths		
		$\frac{17}{100}$	
			0.2

Complete the table.

Image	Words	Fraction	Decimal
	five tenths		
			0.9

What fractions and decimals are represented in these diagrams?

We can use a part-whole model to partition 56 hundredths into tenths and hundredths.

Partition into tenths and hundredths:

- 65 hundredths
- $\frac{31}{100}$
- 80 hundredths

Order these decimals and fractions, using a number line.

0.1 0.5 0.65 $\frac{3}{10}$ $\frac{7}{100}$ $\frac{80}{100}$

Place the numbers in ascending order on the number line.

3.115 $3\frac{113}{1000}$ Three and 11 hundredths

Use the number lines to round 3.24 to the nearest tenth and the nearest whole number.

Change 0.639 into three fractions.

0.639 = $\frac{\square}{1000}$ + $\frac{\square}{100}$ + $\frac{\square}{10}$

10	Fractions: calculating Solving problems	Knows how to add and subtract fractions with the same denominator.	Knows how to convert fractions to a common denominator for addition and subtraction.	<ul style="list-style-type: none"> ● To solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. ● To recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ ● To solve simple measure and money problems involving fractions and decimals to two decimal places. 	<ul style="list-style-type: none"> ● To recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements > 1 as a mixed number. ● To add and subtract fractions with the same denominator and multiples of the same number
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Links to resources and policy documents:

Use the counters and bar models to calculate the whole:

There are ____ counters in one part.

$\frac{1}{4} = \frac{\quad}{4}$ $\frac{2}{4} = \frac{\quad}{4}$ $\frac{3}{4} = \frac{\quad}{4}$ $\frac{4}{4}$ or 1 whole = ____

There are 7 counters in one part.

$\frac{1}{4} = \frac{\quad}{4}$ $\frac{2}{4} = \frac{\quad}{4}$ $\frac{3}{4} = \frac{\quad}{4}$ $\frac{4}{4}$ or 1 whole = ____

Equivalent fractions
However, sometimes the denominators are different.
You use equivalent fractions to make them the same.
A **common multiple** of 2 and 3 is 6.
So, for each fraction we need an equivalent fraction with a denominator of 6.
Now you can add these together.

$$\frac{1}{2} + \frac{1}{3} = ?$$

$$\frac{1 \times 3}{2 \times 3} = \frac{3}{6} \quad \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

Tommy converts the improper fraction $\frac{27}{8}$ into a mixed number using bar models.

Use Tommy's method to convert $\frac{25}{8}, \frac{27}{6}, \frac{18}{7}$ and $\frac{32}{4}$

Write three fraction equations for this model.

Answer

$$\frac{3}{8} + \frac{4}{8} =$$

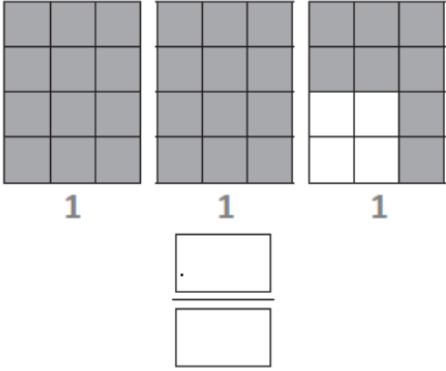









$$\frac{5}{7} - \frac{2}{7} =$$

True or false?

$$\frac{5}{6} + \frac{2}{6} = \frac{7}{12}$$

$$\frac{13}{20} - \frac{3}{20} = \frac{1}{2}$$

Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

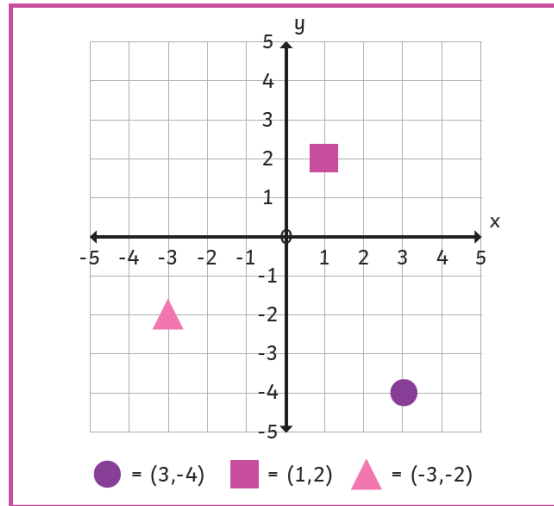
					 <p>Farmer Staneff owns a field. He plants carrots on $\frac{1}{3}$ of the field. He plants potatoes on $\frac{2}{9}$ of the field. He plants onions on $\frac{5}{18}$ of the field. What fraction of the field is covered altogether?</p>												
11.	Addition and subtraction: written methods including money in pounds and pence.	Knows how to add and subtract using standard written algorithms including in the context of money.	Knows and applies the formal written methods of columnar addition and subtraction within the context of money.	<ul style="list-style-type: none"> To add and subtract numbers with up to four digits using the efficient written methods of columnar addition and subtraction where appropriate. To estimate and use inverse operations to check answers to a calculation. To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 	<ul style="list-style-type: none"> To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction). To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. 												
<p>Links to resources and policy documents:</p> <p> $\begin{array}{r} \text{£}3.22 \\ + \text{£}5.71 \\ \hline \text{£}8.93 \end{array}$ $\begin{array}{r} \text{£}3.22 \\ + \text{£}5.71 \\ \hline \text{£}8.93 \end{array}$ $\begin{array}{r} \text{£}8.93 \\ - \text{£}5.71 \\ \hline \text{£}3.22 \end{array}$ </p>				<table border="1" data-bbox="1368 1199 1834 1461"> <thead> <tr> <th colspan="3">Price list</th> </tr> </thead> <tbody> <tr> <td>footballs</td> <td></td> <td>£4.40 each</td> </tr> <tr> <td>tennis balls</td> <td></td> <td>£6.50 for 3</td> </tr> <tr> <td>golf balls</td> <td></td> <td>£4.35 for 4</td> </tr> </tbody> </table> <p>I buy 8 golf balls, 12 tennis balls and 2 footballs. How much change will I get from £50?</p>	Price list			footballs		£4.40 each	tennis balls		£6.50 for 3	golf balls		£4.35 for 4	<p>Alisha has £18.35 in her purse. Her father gives her £5 pocket money. She buys a book for £7.99 and a bag for £13.49. How much will she have left?</p> <p>Write the amount £100 000 less than (a) £600 000 (b) £870 000 (c) 1 000 000 (d) £111 111</p>
Price list																	
footballs		£4.40 each															
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12.	Geometry: position and direction all four quadrants	Knows how to describe positions as translations using the correct terms.	Knows how to describe a translation or reflection of a shape, including reference to the axes in the first quadrant.	<ul style="list-style-type: none"> To describe positions on a 2D grid as coordinates in the first quadrant. To describe movements between positions as translations of a given unit to the left/right and up/down. To plot specified points and draw sides to complete a given polygon. 	<ul style="list-style-type: none"> To identify, describe and represent the position of a shape following a reflection or translation using the appropriate language, and know that the shape has not changed. 												

Mathematics Medium Term Planning: Spring term Class 4 – Y4/5.

Links to resources and policy documents:

Describe the positions and translations of the 2D shapes:

Starting Coordinates:	Starting Coordinates:	Starting Coordinates:	Starting Coordinates:
Translation:	Translation:	Translation:	Translation:
Finishing Coordinates:	Finishing Coordinates:	Finishing Coordinates:	Finishing Coordinates:

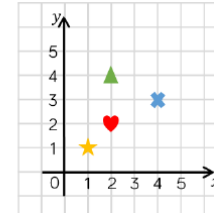


Coordinates can use positive and negative numbers. Whether positive or negative, always write the x-axis coordinate followed by the y coordinate.

Look at the circle point. It is 3 squares along and 4 down. We write this coordinate as (3, -4).

Describe the translation from:

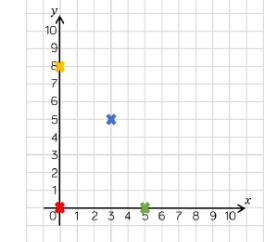
- ▲ to ✕ ♥ to ★
- ▲ to ♥ ★ to ✕



Write the coordinates for the points shown.

- ✕ (,) ✕ (,)
- ✕ (,) ✕ (,)

Plot two more points to create a square.



Translate A 6 right and 3 down. Record the coordinates before (,) and after (,)
 Translate B and C 4 left and 3 up. Record the coordinates before (,) and after (,)

