
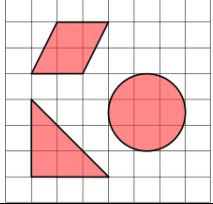

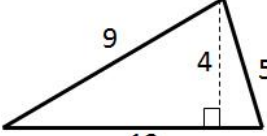
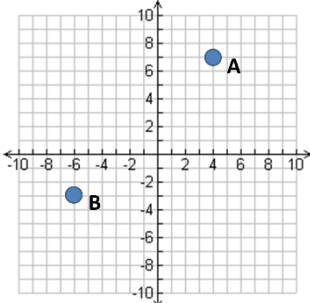


## Year 7 Autumn 1 Set 4

Topic/Skill	Definition/Tips	Example
1. Multiple	The result of multiplying a number by an integer. The <b>times tables</b> of a number.	The first five multiples of 7 are:  7, 14, 21, 28, 35
2. Factor	A number that <b>divides exactly</b> into another number without a remainder.  It is useful to write factors in pairs	The factors of 18 are: 1, 2, 3, 6, 9, 18  The factor pairs of 18 are: 1, 18 2, 9 3, 6
3. Lowest Common Multiple (LCM)	The <b>smallest</b> number that is in the <b>times tables</b> of each of the numbers given.	The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.
4. Highest Common Factor (HCF)	The <b>biggest</b> number that <b>divides exactly</b> into two or more numbers.	The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.
5. Prime Number	A number with <b>exactly two factors</b> .  A number that can only be divided by itself and one.  The number <b>1 is not prime</b> , as it only has one factor, not two.	The first ten prime numbers are:  2, 3, 5, 7, 11, 13, 17, 19, 23, 29
6. Square Number	The number you get when you <b>multiply a number by itself</b> .	<b>1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225...</b> $9^2 = 9 \times 9 = 81$
7. Multiplying with decimals	Multiply each number by a power of ten until it is an integer. Multiply the numbers together. Then divide by answer by the total power of ten.	
8. Dividing with decimals	Write the question as a fraction, multiply numerator and denominator by the same power or 10 until they are integers. Then divide the two numbers	
9. Rounding	Find the place value you need to round to, look one place to the right. 5 or more- round up 4 or less- keep the same	
10. Multiplying and Dividing 2 positive numbers	Results in a positive answer	
11. Multiplying and Dividing 2	Results in a positive answer	

negative numbers		
12. Multiplying and Dividing 1 negative and 1 positive number	Results in a negative answer	
13. Adding and Subtracting Negative Numbers	$a + + b \quad a + b$ $a - - b \quad a + b$ $a + - b \quad a - b$ $a - + b \quad a - b$	
14. Perimeter	<p>The <b>total distance</b> around the <b>outside</b> of a shape.</p> <p>Units include: <i>mm, cm, m</i> etc.</p>	<p style="text-align: center;"><b>8 cm</b></p>  <p style="text-align: center;"><b>5 cm</b></p> <p style="text-align: center;"><math>P = 8 + 5 + 8 + 5 = 26cm</math></p>
15. Area	<p>The amount of <b>space inside</b> a shape.</p> <p>Units include: <math>mm^2, cm^2, m^2</math></p>	
16. Area of a Rectangle	<b>Length x Width</b>	 <p style="text-align: right;"><math>A = 36cm^2</math></p>
17. Area of a Triangle	<b>Base x Height ÷ 2</b>	 <p style="text-align: right;"><math>A = 24cm^2</math></p>
18. Coordinates	<p>Written in <b>pairs</b>. The <b>first</b> term is the <b>x-coordinate</b> (movement <b>across</b>). The <b>second</b> term is the <b>y-coordinate</b> (movement <b>up or down</b>)</p>	 <p style="text-align: right;">A: (4,7) B: (-6,-3)</p>
19. Metric System	<p>A system of measures based on:</p> <ul style="list-style-type: none"> <li>- the metre for length</li> <li>- the kilogram for mass</li> <li>- the second for time</li> </ul>	<p style="text-align: center;"><math>1kilometres = 1000 metres</math>  <math>1 metre = 100 centimetres</math>  <math>1 centimetre = 10 millimetres</math></p> <p style="text-align: center;"><math>1 kilogram = 1000 grams</math></p>

	<b>Length: mm, cm, m, km</b> <b>Mass: mg, g, kg</b> <b>Volume: ml, cl, l</b>	
20. Imperial System	A system of weights and measures originally developed in England, usually based on human quantities  <b>Length: inch, foot, yard, miles</b> <b>Mass: lb, ounce, stone</b> <b>Volume: pint, gallon</b>	$1\text{ lb} = 16\text{ ounces}$ $1\text{ foot} = 12\text{ inches}$ $1\text{ gallon} = 8\text{ pints}$
21. Metric and Imperial Units	Use the <b>unitary method</b> to convert between metric and imperial units.	$5\text{ miles} \approx 8\text{ kilometres}$ $1\text{ gallon} \approx 4.5\text{ litres}$ $2.2\text{ pounds} \approx 1\text{ kilogram}$ $1\text{ inch} = 2.5\text{ centimetres}$
23. Multiplying with decimals	Multiply each number by a power of ten until it is an integer. Multiply the numbers together. Then divide by answer by the total power of ten.	
24. Dividing with decimals	Write the question as a fraction, multiply numerator and denominator by the same power or 10 until they are integers. Then divide the two numbers	
25. Rounding	Find the place value you need to round to, look one place to the right. 5 or more- round up 4 or less- keep the same	