



St John Fisher RC Primary School

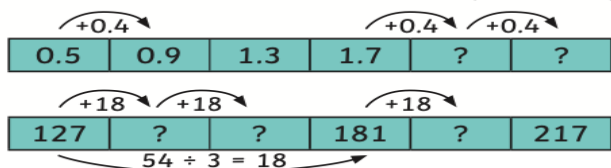
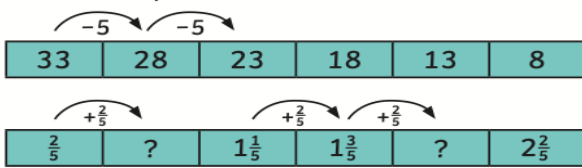
Year 6 Maths Knowledge Organiser

Summer – Algebra (1)

Objectives	Teacher
• I can use simple formulae.	
• I can create describe linear number sequences.	
• I can record missing number problems algebraically.	

Algebra

Linear number sequences. A number sequence that increases or decreases by the same amount each time

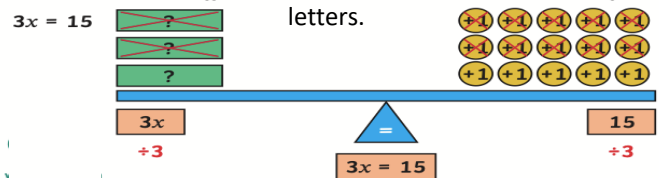


A **formula** is a special type of equation that shows the link between different substituted variables.

Area of rectangle = length x width

Area of a triangle = (base x height) divided by 2
(12.5 x hours worked) + 25 = cost of job

In algebra, **missing number equations** are shown with letters.



Key Vocabulary

Term to term rule	A sequence where the next term is taken from the previous one.
Variable	A quantity that can be of different numerical values.
Unknown	A quantity that is not known or calculated yet.
Expression	A group of numbers, letters and mathematical operation symbols.
Equation	A number statement that ends in an equals (=) sign.
Formula	A special type of equation that shows the link between different substituted variables.
Substitution	To replace something with something else.
Enumerate	To work out the number of something one at a time.

Sentence Stems

If the input is _____, then the output is _____	First, I'm going to _____ then I'm going to _____
If the input is _____ and the output is _____, then the function is _____	If _____ is worth _____ then _____ is worth _____

Assessment

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St John Fisher RC Primary School

Year 6 Maths Knowledge Organiser

Summer – Algebra (2)

Objectives	Teacher
• I can find pairs of numbers which complete an equation with two unknowns.	
• I can create a list of possibilities of the combination of two variables.	

Algebra

<p>In an equation with two unknown numbers, there may be several possible values for the unknowns that will balance the equation.</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> $ab = 18$ <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr><th style="width: 50%;">a</th><th style="width: 50%;">b</th></tr> </thead> <tbody> <tr><td>1</td><td>18</td></tr> <tr><td>2</td><td>9</td></tr> <tr><td>3</td><td>6</td></tr> <tr><td>6</td><td>3</td></tr> <tr><td>9</td><td>2</td></tr> <tr><td>18</td><td>1</td></tr> </tbody> </table> </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> $2a + b = 10$ <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr><th style="width: 50%;">a</th><th style="width: 50%;">b</th></tr> </thead> <tbody> <tr><td>2</td><td>6</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>4</td><td>2</td></tr> <tr><td>5</td><td>0</td></tr> </tbody> </table> </div> </div>	a	b	1	18	2	9	3	6	6	3	9	2	18	1	a	b	2	6	3	4	4	2	5	0	<p>An expression is a group of numbers, letters and operations.</p> <p style="text-align: center;">Add 14 to a $a + 14$</p> <p style="text-align: center;">Subtract 20 from b $b - 20$</p> <p style="text-align: center;">Multiply c by 4 $4c$</p> <p style="text-align: center;">12 more than d $d + 12$</p> <p style="text-align: center;">Multiply e by 3 and subtract 5 $3e - 5$</p> <p style="text-align: center;">Add 12 to f and then multiply by 2 $2(f + 12)$</p> <p>An equation is a number statement with an equals (=)</p> <p style="text-align: center;">$a + 14 = 20$</p> <p style="text-align: center;">$b - 20 = 15$</p> <p style="text-align: center;">$4c = 28$</p> <p style="text-align: center;">$d + 12 = 30$</p> <p style="text-align: center;">$3e - 5 = 10$</p> <p style="text-align: center;">$2(f + 12) = 44$</p> <p style="font-size: small;">An equation is a number statement with an equal sign (=). Expressions on either side of the equal sign are of equal value.</p>
a	b																								
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3	6																								
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Sentence Stems

The first step in solving the equation is _____ The second step in solving the equation is _____	_____ more/less than _____ is equal to _____ can be written as the equation _____ = _____ The equation means that the expression _____ is equal to _____
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Assessment

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