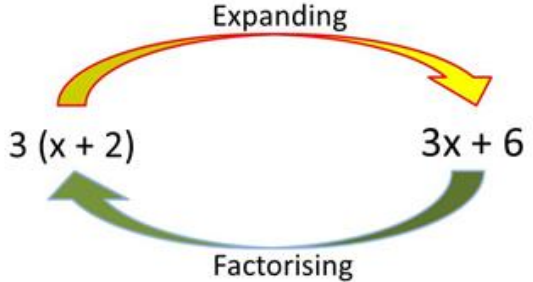
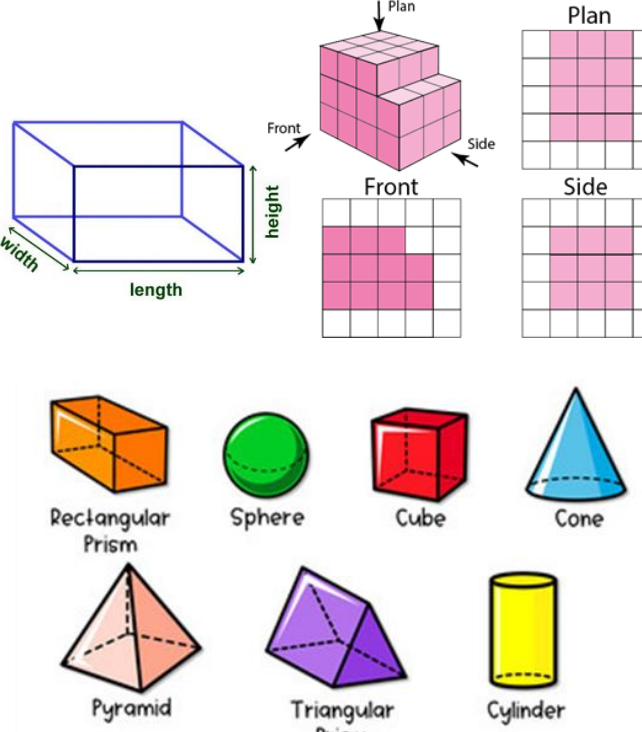


Maths Subject/Topic: Algebra	Subject/Topic: Algebra	Subject/Topic: Volume and 3-d shapes
Key ideas: Expand factorise expressions	Key ideas: Solve equations by using inverse operations	Key ideas: Name 3-d shapes, recognise plans and elevations
 <p style="text-align: center;">Expanding</p> <p style="text-align: center;">$3(x + 2) \quad 3x + 6$</p> <p style="text-align: center;">Factorising</p> <div style="background-color: #e0ffe0; padding: 10px; border: 1px solid #c0ffc0; margin: 10px 0;"> <p style="text-align: center; font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">F O I L</p> <p style="text-align: center; font-size: 0.8em;">first outer inner last</p> <p style="text-align: center; font-size: 0.8em;">multiply</p> <p style="text-align: center; font-size: 1.5em;">$(x + 8)(x + 5)$</p> <p style="text-align: center; font-size: 0.8em;">multiply</p> <p style="text-align: center; font-size: 1.2em;">$x^2 + 5x + 8x + 40$</p> <p style="text-align: center; font-size: 1.2em;">$x^2 + 13x + 40$</p> </div>	<p style="text-align: center;">Solve $4x + 6 = 14$</p> $4x + 6 = 14 \quad \left \begin{array}{l} - 6 \\ \hline \end{array} \right.$ $4x = 8 \quad \left \begin{array}{l} \div 4 \\ \hline \end{array} \right.$ $x = 2$ $x^2 - x - 6 = 0$ $(x - 3)(x + 2) = 0$ $x - 3 = 0 \quad \text{or} \quad x + 2 = 0$ $\begin{array}{r} x - 3 = 0 \\ + 3 \quad + 3 \\ \hline x = 3 \end{array} \quad \left \begin{array}{l} \uparrow \\ \hline \end{array} \right. \quad \begin{array}{r} x + 2 = 0 \\ - 2 \quad - 2 \\ \hline x = -2 \end{array}$	 <p style="text-align: center;">Plan</p> <p style="text-align: center;">Plan</p> <p style="text-align: center;">Front</p> <p style="text-align: center;">Side</p> <p style="text-align: center;">Front</p> <p style="text-align: center;">Side</p> <p style="text-align: center;">width</p> <p style="text-align: center;">length</p> <p style="text-align: center;">height</p> <p style="text-align: center;">Rectangular Prism</p> <p style="text-align: center;">Sphere</p> <p style="text-align: center;">Cube</p> <p style="text-align: center;">Cone</p> <p style="text-align: center;">Pyramid</p> <p style="text-align: center;">Triangular Prism</p> <p style="text-align: center;">Cylinder</p>
Keywords /Key Language:	Keywords /Key Language:	Keywords /Key Language:
<p>Integer – Whole Number</p> <p>Expression – Numbers, letters and operators, but no equals sign</p> <p>Linear – Where the unknown is a single power</p> <p>Quadratic – Where the unknown is squared</p> <p>Expand – Multiply out brackets</p> <p>Factorise – Put back into brackets</p> <p>Coefficient – the number in front of the unknown</p>	<p>Equation – Numbers, letters and operators, with an equals sign</p> <p>Unknown – The letters in an expression or equation</p> <p>Solve – Find the value of an unknown</p> <p>Substitute – Use a given value for the unknown in an equation or expression</p>	<p>Face – The flat surface of a 3-d shape</p> <p>Edge – Where two faces meet</p> <p>Vertex – Where three or more faces meet</p> <p>Prism – A solid object with two identical ends</p> <p>Volume – The space inside a 3-d object</p> <p>Net – A pattern you can fold to make a 3-d object</p> <p>Plan – The view from above an object</p> <p>Elevation – The view from the side of an object</p> <p>Surface Area – The area of all faces combined</p>

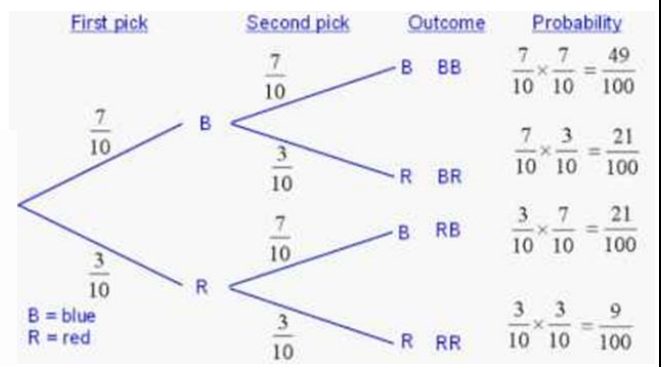
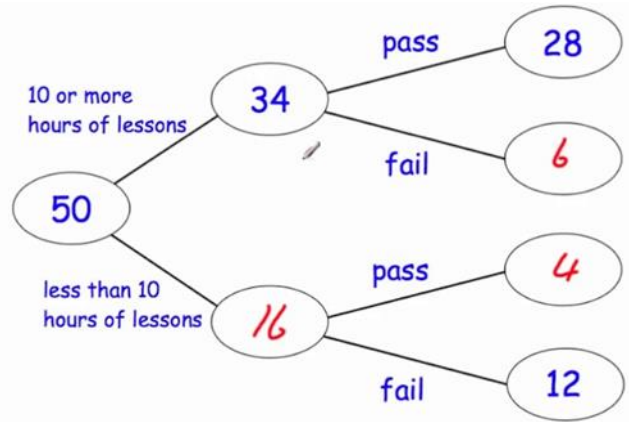
Maths Subject/Topic: Fractions Decimals and Percentages

Subject/Topic: Probability

Key ideas: Convert between F/D/P

Key ideas: Understand key concepts about probability

Percentage	Fraction	Decimal
100%	1	1
75%	3/4	0.75
66.66%	2/3	0.66
50%	1/2	0.50
33.33%	1/3	0.33
25%	1/4	0.25
20%	1/5	0.20
12.5%	1/8	0.125
10%	1/10	0.10
5%	1/20	0.05
2.5%	1/40	0.025



$$\text{Theoretical Probability} = \frac{\text{Number of favorable (desired) outcomes}}{\text{Total number of possible outcomes}}$$



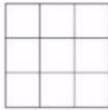




Keywords /Key Language:

Keywords /Key Language:

Percentage – Parts per hundred
Fraction – Part of a whole
Decimal – A number with a decimal point in it
Convert – Change between fraction, decimal or %
Equivalent – Equal in value
Compare – Look at the difference between numbers
Order – List numbers from smallest to biggest
Recurring – When a decimal number repeats forever
Improper – Numerator is larger than the denominator
Mixed number – A whole number and a fraction

Probability – The chance of an event happening
Impossible – When the probability is zero
Even – When an event is equally likely to happen as not happen
Certain – When the probability is one
Outcome – A possible result from an experiment
Frequency – How often an event occurs
Independent – When events do not influence each other
Dependent – When an event has an effect on another

Maths Subject/Topic: Algebra	Subject/Topic: Algebra	Subject/Topic: Volume and 3-d shapes								
Key ideas: Expand factorise expressions	Key ideas: Solve equations by using inverse operations	Key ideas: Name 3-d shapes, recognise plans and elevations								
<p>Expand the following brackets.</p> <ol style="list-style-type: none"> 1) $3(x + 5)$ 2) $2(3y - 4)$ 3) $x(x + 2)$ <p>Expand and simplify</p> <ol style="list-style-type: none"> 1) $2(x - 5) + 4(x + 2)$ 2) $5(x + 3) - 2(x - 4)$ <p>Factorise fully:</p> <ol style="list-style-type: none"> 1) $6b - 9$ 2) $36 - 6c$ 3) $27a - 18b - 9c$ <p>Factorise fully:</p> <ol style="list-style-type: none"> 1) $3a^2 + 2a$ 2) $10b + 15b^2$ 3) $12ab^2 + 18b$ 	<p>Solve</p> $2x + 8 = 22 \qquad 5x - 3 = 17$ <p>Solve</p> $3(x + 4) = 27$ <p>Solve the following equation</p> $2t - 6 = 6t + 12$	<div style="text-align: right;">   </div> <p>A solid cuboid is made from centimetre cubes. The plan view, front elevation and side elevation are shown.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Plan view</p> </div> <div style="text-align: center;">  <p>Front elevation</p> </div> <div style="text-align: center;">  <p>Side elevation</p> </div> </div> <p>How many centimetre cubes were used to make the cuboid?</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 0 15px;">A</td> <td style="padding: 0 15px;">B</td> <td style="padding: 0 15px;">C</td> <td style="padding: 0 15px;">D</td> </tr> <tr> <td style="padding: 0 15px;">7</td> <td style="padding: 0 15px;">9</td> <td style="padding: 0 15px;">15</td> <td style="padding: 0 15px;">30</td> </tr> </table> <hr style="width: 20%; margin: 10px auto;"/> <p>How many faces edges and vertices are there on a</p> <ol style="list-style-type: none"> a) Cube b) Tetrahedron c) Dodecahedron d) Icosahedron 	A	B	C	D	7	9	15	30
A	B	C	D							
7	9	15	30							

Maths Subject/Topic: Fractions Decimals and Percentages

Key ideas: Convert between F/D/P

Write these percentages as decimals

23%	0.23
6%	
20%	
150%	
3.5%	

Convert to a decimal and a percentage

1) $\frac{1}{3} =$

2) $\frac{4}{5} =$

3) $\frac{1}{3} =$

4) $\frac{8}{10} =$

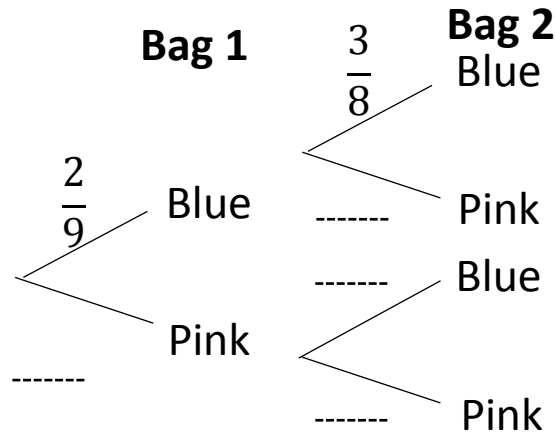
5) $\frac{3}{10} =$

Subject/Topic: Probability

Key ideas: Understand key concepts about probability

Tabitha has two bags. The first bag contains **2 blue counters** and **7 pink counters**. The second bag contains **3 blue counters** and **5 pink counters**.

- Complete the probability tree diagram.
- Find $p(\text{Both the same colour})$
- Find $p(\text{at least one Blue})$



1) 100 students are asked if they like tea.
 45 of these students are boys.
 28 girls like tea.
 19 boys dislike tea.
 Complete the frequency tree.

