
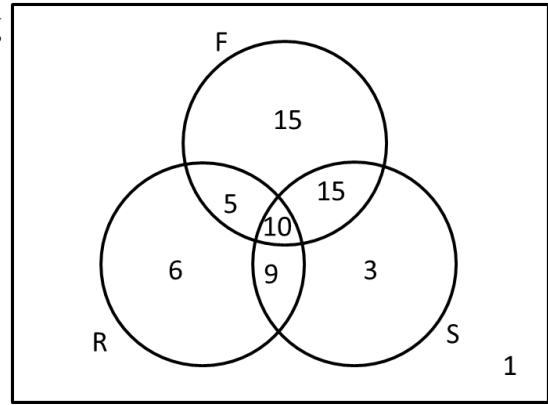

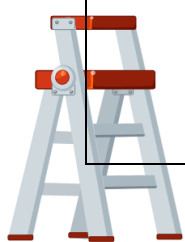
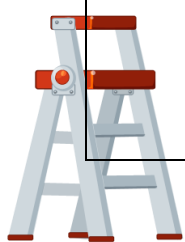


Percentage	I can ...	Prove it!
	<p>H12.3 I can solve more complex problems using tree diagrams</p>	<p>Abdul has 20 biscuits in a tin. There are: 10 ginger snaps 7 chocolate creams 3 shortbread rounds Abdul takes two biscuits from the tin at random. Work out the probability that he gets two different types of biscuits.</p> 
	<p>H12.2 I can use Venn diagrams with three regions</p>	<p>At a restaurant diners can choose (if they wish) any combinations of fries, salad or rice to accompany the main course.</p> <p>The Venn diagram shows the number of people choosing each dish on Friday. How many people dined at the restaurant on Friday?</p>  <p>A person is selected at random, work out the probability that they chose: Fries Rice and salad Rice or fries No side dish</p> <p>Given that the person selected had fries, what is the probability that they all had rice?</p>
	<p>H12.1 I can calculate conditional probabilities</p>	<p>Jordan flips two coins. Given that one is showing tails, what is the probability that both show tails?</p>  <p>Talia rolls a die. Given that she has rolled an odd number what is the probability that she rolled a 3?</p>
	<p>C14.4 I can construct tree diagrams to solve probability problems</p>	<p>Josh has 3 yellow counters and 5 blue counters. He takes one from a bag, notes the colour and replaces it. He then repeats this. Create a tree diagram to display this information.</p>



Percentage	I can ...	Prove it!												
	C14.3 I can use tree diagrams to calculate probability	<p>Alex has an 80% chance of passing a test. Brad has a 60% chance of passing the test.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Brad</p> </div> <div style="text-align: center;"> <p>Alex</p> </div> </div> <p>Work out the probability that Alex and Brad both fail the test.</p>												
	C12.1 I can find the group size of a stratified sample	<p>Demi would like to take a stratified sample of 30 students, how many students should he ask from each class?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Class</th> <th>10A</th> <th>10B</th> <th>10C</th> <th>10D</th> <th>10E</th> </tr> </thead> <tbody> <tr> <td>No.</td> <td>30</td> <td>28</td> <td>27</td> <td>20</td> <td>15</td> </tr> </tbody> </table> <p>At Oasis Silvertown 10 year 8 pupils are questioned for a survey. The total sample size of the survey is 70. There are 840 pupils in the school. How many pupils are there in year 8?</p>	Class	10A	10B	10C	10D	10E	No.	30	28	27	20	15
Class	10A	10B	10C	10D	10E									
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	C13.4 I can use the addition law for calculating probability	<p>Miss Cairns has a deck of cards calculate the probability that the card she draws will be:</p> <ol style="list-style-type: none"> A 4 or a 5? A red 5 or a red 6? A jack, queen or king? Not a 5 or a 7? <p>All of the events above are mutually exclusive, explain why this is? What is the probability she draws a jack or a red card or one that is both? Why is this scenario non-mutually exclusive?</p>												
	C13.4 I can construct Venn diagrams and two-way tables to solve probability problems	<p>Iman asks her class if they like pizza or burgers. There are 30 people in Iman's class. 17 like both pizza and burgers. 3 like pizza only. 8 don't like either. Draw a Venn diagram to show this information.</p> <p>What is the probability of asking someone who only likes burgers? What is the probability of $P(P \cap B)$? What is the probability of $P(P \cup B)$?</p>												



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	C13.2 I can use Venn diagrams and two-way table to solve probability problems	<p>The table below shows how 50 counters are labelled either A or B and coloured either red or blue.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="background-color: red;">Red</td> <td style="background-color: blue;">Blue</td> </tr> <tr> <td style="background-color: #d3d3d3;">A</td> <td style="text-align: center;">11</td> <td style="text-align: center;">9</td> </tr> <tr> <td style="background-color: #d3d3d3;">B</td> <td style="text-align: center;">15</td> <td style="text-align: center;">15</td> </tr> </table> <p>One counter is chosen at random. What's the probability that the counter is:</p> <ul style="list-style-type: none"> - Labelled A - Red - Red and labelled B - Red, or labelled B, or both 		Red	Blue	A	11	9	B	15	15
	Red	Blue									
A	11	9									
B	15	15									
	C12.2 I can evaluate the reliability of different types of sampling	<p>Miss Mitchell would like to conduct a survey to find out about the school lunches. She does not have time to get information from all the students so she decides to use a sample. List the advantages and disadvantages of the sampling methods that Mr Holmes suggests that she could use:</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 30%; background-color: #f0e6ff;"> Use a spreadsheet. Number all the students 1-240. Use a random number generator to select 30 students. </div> <div style="border: 1px solid black; padding: 5px; width: 30%; background-color: #ffe4c4;"> Use a spreadsheet. Number all the students 1-240. Choose every 10th name from the list. </div> <div style="border: 1px solid black; padding: 5px; width: 30%; background-color: #e0ffff;"> Sort all the students based on gender and form class. Take a random sample from each group in proportion to the size of the group. </div> </div> <div style="border: 1px solid black; padding: 5px; width: 30%; margin-top: 5px; background-color: #c8e6c9;"> Randomly select 5 students from each form class. </div>									
	C14.2 I can use the product rule for counting possible outcomes	<p>On a menu, there are 8 choices for a starter and 15 choices for a main course. How many different combinations of two courses can be made?</p>									



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	C14.1 I can systematically list sample spaces	<p>Taylor, Kera and Jade have booked three seats together at the theatre.</p> <p>List all the possible ways in which they could sit.</p> <p>How many different arrangements are there?</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #008000; color: white;">Seat 1</th> <th style="background-color: #008000; color: white;">Seat 2</th> <th style="background-color: #008000; color: white;">Seat 3</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Taylor</td> <td style="text-align: center;">Kera</td> <td style="text-align: center;">Jade</td> </tr> <tr> <td style="text-align: center;">...</td> <td style="text-align: center;">...</td> <td style="text-align: center;">...</td> </tr> </tbody> </table>	Seat 1	Seat 2	Seat 3	Taylor	Kera	Jade
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...									
	C13.1 I can use and apply relative frequency	<p>A card is selected from a complete deck (excluding jokers). Find the probability of each event giving your answer as a fraction. Then rank the events from most likely to least likely:</p> <ul style="list-style-type: none"> • The card will be black. • The card will be a heart. • The card will be a number less than 10. • The card will be the 6 of clubs. • The card will be a 2. • The card will be a black 4. <p>I pick 30 cards at random from the deck, how many would you expect to be red?</p>									

Key Words:

- Relative frequency
- Mutually Exclusive
- Event
- Venn Diagram
- Element
- Universal Set
- Union
- Intersection
- Tree Diagram
- Product Rule
- Conditional
- Independent

