



Fill In The Blanks...



Tree Diagrams for Dependent Events

Question	Tree Diagram	Probability
<p>There are 6 red balls and 4 green balls in a bag. Two balls are chosen at random. Complete the tree diagram and calculate the probability of each outcome.</p>	<p style="text-align: center;">2nd Ball</p>	$P(RR) = \frac{6}{10} \times \frac{5}{9} = \frac{30}{90}$
		$P(RG) = \frac{6}{10} \times \frac{4}{9} = \frac{24}{90}$
		$P(GR) = \frac{4}{10} \times \frac{6}{9} = \frac{24}{90}$
		$P(GG) = \frac{4}{10} \times \frac{3}{9} = \frac{24}{90}$
<p>There are 6 boys and 5 girls in a football team. Two team members are chosen at random. Complete the tree diagram and calculate the probability of each outcome.</p>	<p style="text-align: center;">2nd Choice</p>	$P(BB) = \frac{6}{11} \times \frac{5}{10} = \frac{30}{110}$
		$P(BG) = \frac{6}{11} \times \frac{5}{10} = \frac{30}{110}$
		$P(GB) = \frac{5}{11} \times \frac{6}{10} = \frac{30}{110}$
		$P(GG) = \frac{5}{11} \times \frac{4}{10} = \frac{20}{110}$
<p>There are 4 donuts and 3 cookies in a tin. Riaz chooses two treats at random. Complete the tree diagram and calculate the probability of each outcome.</p>	<p style="text-align: center;">2nd Treat</p>	$P(DD) = \frac{4}{7} \times \frac{3}{6} = \frac{12}{42}$
		$P(DC) = \frac{4}{7} \times \frac{3}{6} = \frac{12}{42}$
		$P(CD) = \frac{3}{7} \times \frac{4}{6} = \frac{12}{42}$
		$P(CC) = \frac{3}{7} \times \frac{2}{6} = \frac{6}{42}$
<p>There are 7 blue pens and 5 red pens in a pencil case. Two pens are chosen at random. Complete the tree diagram and calculate the probability of each outcome.</p>	<p style="text-align: center;">2nd Pen</p>	$P(BB) = \frac{7}{12} \times \frac{6}{11} = \frac{42}{132}$
		$P(BR) = \frac{7}{12} \times \frac{5}{11} = \frac{35}{132}$
		$P(RB) = \frac{5}{12} \times \frac{7}{11} = \frac{35}{132}$
		$P(RR) = \frac{5}{12} \times \frac{4}{11} = \frac{20}{132}$