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| **Fill in the Blanks** | **Tree Diagrams for Independent Events** |

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| **Question** | **Tree Diagram** | **Probability** |
| The probability of passing a music exam is 0.7. Diana and Dev both sit the music exam. Complete the tree diagram and calculate the probability of each outcome. |  | $$P\left(PP\right)=0.7×0.7=$$ | $$0.49$$ |
| $$P\left(PF\right)=0.7×0.3=$$ |  |
| $$P\left(FP\right)=0.3×0.7=$$ |  |
| $$P\left(FF\right)=0.3×0.3=$$ |  |
| The probability of a biased coin landing on tails is 0.4. The coin is tossed twice. Complete the tree diagram and calculate the probability of each outcome. |  | $$P\left(HH\right)=0.4×0.4=$$ |  |
| $$P\left(HT\right)= × =$$ |  |
| $$P\left(TH\right)= × =$$ |  |
| $$P\left(TT\right)= × = $$ |  |
| The probability of Abby being late for work is $\frac{1}{6}$. Abby works Monday and Tuesday. Complete the tree diagram and calculate the probability of each outcome. |  | $$P\left(LL\right)= × =$$ |  |
| $$P\left(LO\right)= × =$$ |  |
| $$P\left(OL\right)= × =$$ |  |
| $$P\left(OO\right)= × =$$ |  |
| The probability of stopping at traffic lights is $\frac{3}{8}$. Jameela drives through two sets of traffic lights. Complete the tree diagram and calculate the probability of each outcome. |  |  |  |
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| **Fill in the Blanks** | **Tree Diagrams for Independent Events** |

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| **Question** | **Tree Diagram** | **Probability** |
| Two students, Maria and Maysoon each sit their driving theory exam. Complete the tree diagram and calculate the probability of each outcome. | A diagram of a flowchart  AI-generated content may be incorrect. | $$P\left(PP\right)= × =$$ |  |
| $$P\left(PF\right)= × =$$ |  |
| $$P\left(FP\right)= × =$$ |  |
| $$P\left(FF\right)=0.6×0.6=$$ | $$0.36$$ |
| A biased coin is tossed once and then tossed again for a second time. Complete the tree diagram and calculate the probability of each outcome. | A diagram of a diagram  AI-generated content may be incorrect. | $$P\left(HH\right)=0.2× =$$ | $$0.04$$ |
| $$P\left(HT\right)= × =$$ |  |
| $$P\left(TH\right)= × =$$ |  |
| $$P\left(TT\right)= × = $$ |  |
| A car travels through two sets of traffic lights. The probability of stopping at each set is the same. Complete the tree diagram and calculate the probability of each outcome. |  | $$P\left(SS\right)= × =$$ |  |
| $$P\left(SG\right)= \frac{3}{7} × =$$ |  |
| $$P\left(GS\right)= × =$$ |  |
| $$P\left(GG\right)= × =$$ |  |
| There are 12 red or blue balls in a box. There are more blue balls than red balls. A ball is removed at random, the colour recorded, then replaced. A second ball is then removed. Complete the tree diagram and probabilities. |  | $$P\left(RR\right)= × =$$ |  |
| $$P\left(RB\right)= × =$$ | $$\frac{35}{144}$$ |
| $$P\left(BR\right)= × =$$ |  |
| $$P\left(BB\right)= × =$$ |  |