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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. |  | $$P\left(PP\right)= × =$$ |  |
| $$P\left(PF\right)= × =$$ |  |
| $$P\left(FP\right)= × =$$ |  |
| $$P\left(FF\right)=0.6×0.6=$$ | $$0.36$$ |
| 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. |  | $$P\left(HH\right)=0.2× =$$ | $$0.04$$ |
| $$P\left(HT\right)= × =$$ |  |
| $$P\left(TH\right)= × =$$ |  |
| $$P\left(TT\right)= × = $$ |  |
| 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. |  | $$P\left(RR\right)= × =$$ |  |
| $$P\left(RB\right)= × =$$ | $$\frac{35}{144}$$ |
| $$P\left(BR\right)= × =$$ |  |
| $$P\left(BB\right)= × =$$ |  |