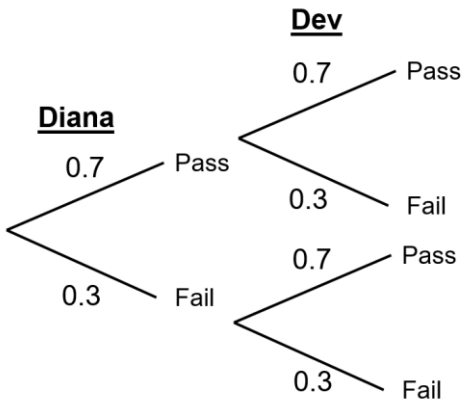
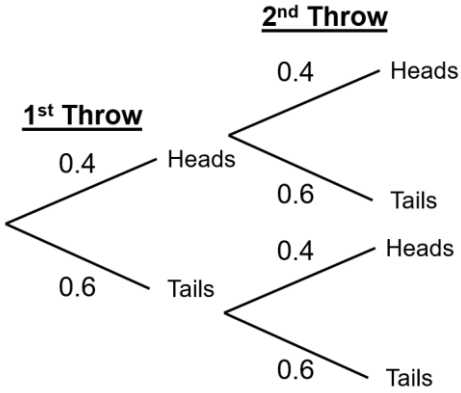
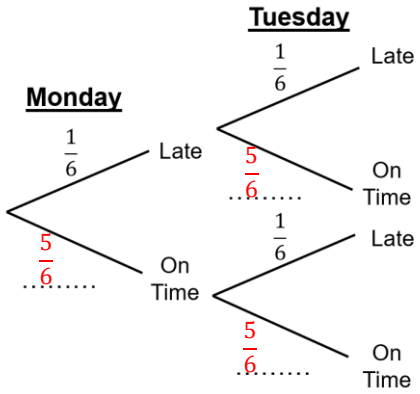
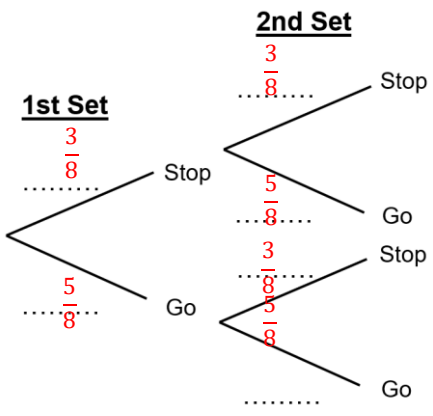
# Fill in the Blanks | Tree Diagrams for Independent Events

| 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. |  | $P(PP) = 0.7 \times 0.7 =$ | 0.49 |
| | | $P(PF) = 0.7 \times 0.3 =$ | 0.21 |
| | | $P(FP) = 0.3 \times 0.7 =$ | 0.21 |
| | | $P(FF) = 0.3 \times 0.3 =$ | 0.09 |
| 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. |  | $P(HH) = 0.4 \times 0.4 =$ | 0.16 |
| | | $P(HT) = 0.4 \times 0.6 =$ | 0.24 |
| | | $P(TH) = 0.6 \times 0.4 =$ | 0.24 |
| | | $P(TT) = 0.6 \times 0.6 =$ | 0.36 |
| 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. |  | $P(LL) = \frac{1}{6} \times \frac{1}{6} =$ | $\frac{1}{36}$ |
| | | $P(LO) = \frac{1}{6} \times \frac{5}{6} =$ | $\frac{5}{36}$ |
| | | $P(OL) = \frac{5}{6} \times \frac{1}{6} =$ | $\frac{5}{36}$ |
| | | $P(OO) = \frac{5}{6} \times \frac{5}{6} =$ | $\frac{25}{36}$ |
| 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. |  | $P(SS) = \frac{3}{8} \times \frac{3}{8} =$ | $\frac{9}{64}$ |
| | | $P(SG) = \frac{3}{8} \times \frac{5}{8} =$ | $\frac{15}{64}$ |
| | | $P(GS) = \frac{5}{8} \times \frac{3}{8} =$ | $\frac{15}{64}$ |
| | | $P(GG) = \frac{5}{8} \times \frac{5}{8} =$ | $\frac{25}{64}$ |