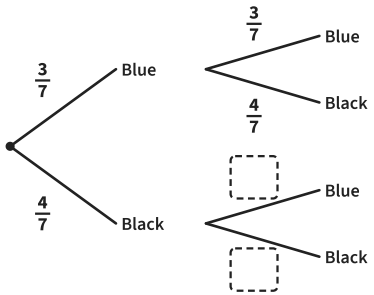
Tree Diagrams

1

A pot holds 3 blue and 4 black pens. A pen is taken and put back, then another is taken. Complete the tree diagram.
Find P(both blue).

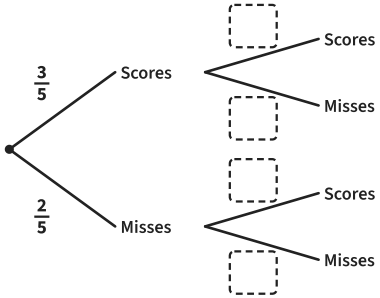


□ × □ = □

multiply along the branches

2

Ola scores a free throw with probability $\frac{3}{5}$. She takes two. Complete the tree diagram. Find P(she scores both).

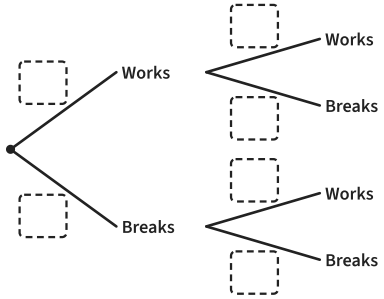


□ × □ = □

multiply along the branches

3

A coffee machine works on any day with probability $\frac{5}{6}$. Complete the tree diagram for two days. Find P(it works on exactly one day).

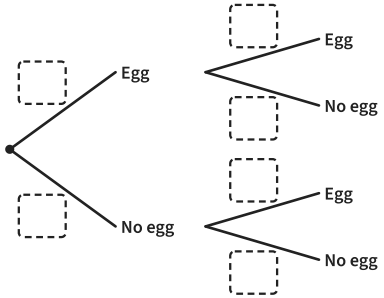


□ × □ + □ × □ = □

add the two paths

4

A hen lays an egg on any morning with probability $\frac{2}{3}$. Complete the tree diagram for two mornings. Find P(at least one egg).

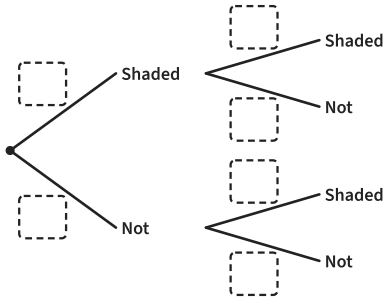


1 − □ × □ = □

1 take away the path with none

5

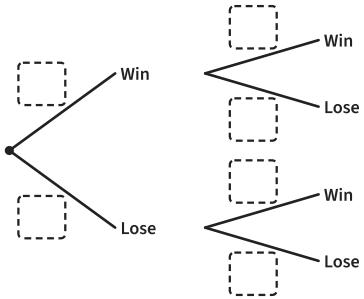
A fair spinner has 8 equal parts, and 3 of them are shaded. It is spun twice.
Complete the tree diagram.
Find the probability that neither spin lands on a shaded part.



Answer _____

6

A school wins its football match with probability $\frac{3}{5}$ and its netball match with probability $\frac{1}{2}$. Complete the tree diagram, football first. Find the probability that the school wins exactly one match.



Answer _____

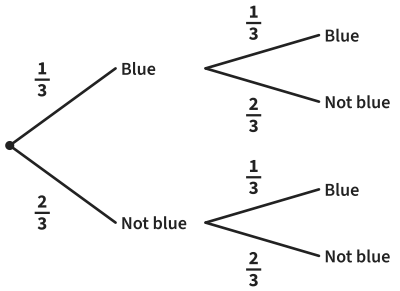
7

A parcel arrives on time with probability $\frac{9}{10}$. Two parcels are sent.
Draw a tree diagram. Find the probability that at least one parcel is late.

Answer _____

8

A spinner lands on blue with probability $\frac{1}{3}$. It is spun twice. Ben says P(blue both times) = $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$. Explain Ben's mistake. Then find P(blue both times).

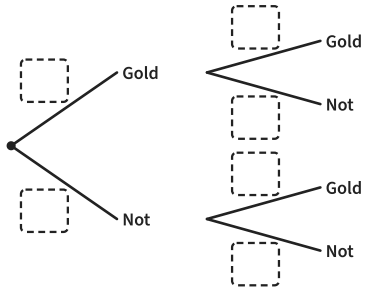


Answer _____

Tree Diagrams *further practice*

9

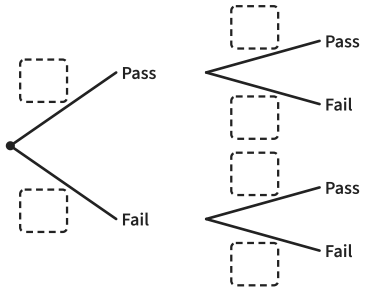
An archer hits the gold with probability $\frac{2}{3}$ with each arrow. She shoots two arrows. Find P(exactly one hits the gold).



Answer _____

10

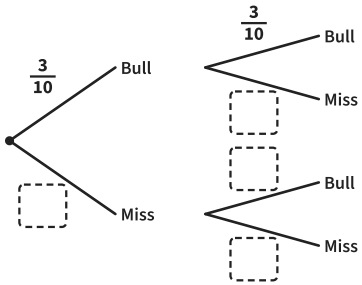
Maya passes maths with probability $\frac{5}{8}$ and science with probability $\frac{2}{3}$. Find P(she fails both).



Answer _____

11

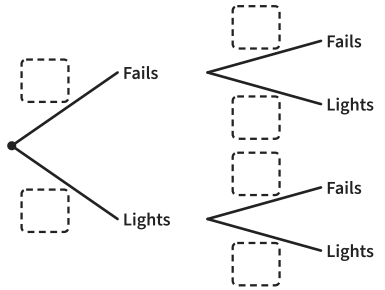
A darts player hits the bull with probability $\frac{3}{10}$ with each dart. Fill in the missing probabilities. Find P(she misses with both darts).



Answer _____

12

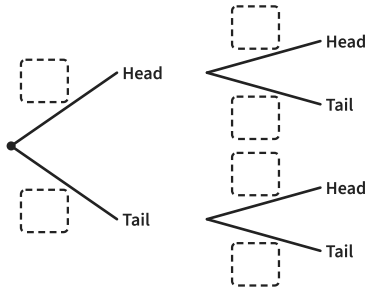
A firework fails to light with probability $\frac{1}{8}$. Two fireworks are lit. Find the probability that at least one fails to light.



Answer _____

13

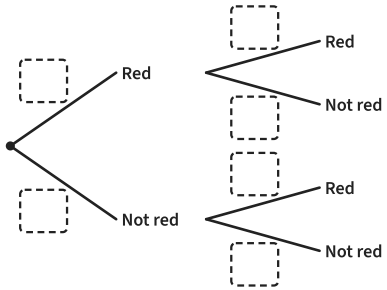
A coin is biased. It is thrown twice. The probability of two heads is $\frac{9}{25}$. Find the probability of two tails.



Answer _____

14

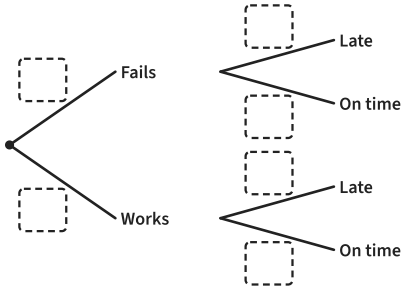
A spinner lands on red with probability $\frac{2}{5}$. It is spun twice. Is it more likely to land on red exactly once, or not at all? Show how you know.



Answer _____

15

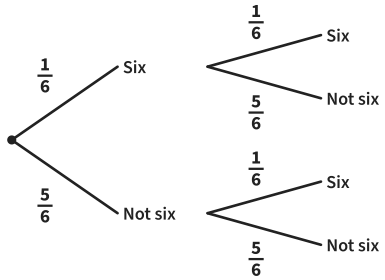
Ruby's alarm fails with probability $\frac{1}{10}$. Her bus is late with probability $\frac{1}{4}$. Find the probability that at least one of them goes wrong.



Answer _____

16

A fair dice is rolled twice. Sam says P(at least one six) = $\frac{1}{6} + \frac{1}{6} = \frac{1}{3}$. Is Sam right? Explain.



Answer _____