

Tree Diagrams and Combined Events *ramp up*

ANSWERS

a A and B are independent. $P(A) = 0.3$, $P(B) = 0.5$. Find $P(A \text{ and } B)$. 0.15 and for independent events: multiply	b A spinner is spun once. $P(\text{red}) = 0.3$, $P(\text{blue}) = 0.5$. Find $P(\text{red or blue})$. 0.8 or for one spin: add	c Find $P(L)$ 0.6 a missing branch	d Find $P(W, W)$ 0.16 along the branches: multiply
e Find $P(\text{one of each})$ 0.48 two routes: add them	f Find $P(\text{at least one } W)$ 0.64 at least one: one minus none	g A bag has 3 red and 5 blue counters. A red is taken out. Find $P(\text{red next})$. $\frac{2}{7}$ without replacement: one fewer	h A bag has 3 red, 5 blue counters. Take two, not replaced. Find $P(\text{both red})$. $\frac{3}{28}$ both, without replacement
i A bag has 3 red, 5 blue counters. Take two, not replaced. Find $P(\text{same colour})$. $\frac{13}{28}$ same colour: two routes, not replaced	j A fair coin is flipped 3 times. Find $P(3 \text{ heads})$. $\frac{1}{8}$ three events in a row	k A fair coin is flipped 3 times. Find $P(\text{at least one head})$. $\frac{7}{8}$ at least one in three events	l Independent events: $P(A) = 0.4$, $P(A \text{ and } B) = 0.12$. Find $P(B)$. 0.3 working backwards: divide

The Maths Habit

Tree Diagrams and Combined Events *ramp up*

ANSWERS

a A and B are independent. $P(A) = 0.3$, $P(B) = 0.5$. Find $P(A \text{ and } B)$. 0.15 and for independent events: multiply	b A spinner is spun once. $P(\text{red}) = 0.3$, $P(\text{blue}) = 0.5$. Find $P(\text{red or blue})$. 0.8 or for one spin: add	c Find $P(L)$ 0.6 a missing branch	d Find $P(W, W)$ 0.16 along the branches: multiply
e Find $P(\text{one of each})$ 0.48 two routes: add them	f Find $P(\text{at least one } W)$ 0.64 at least one: one minus none	g A bag has 3 red and 5 blue counters. A red is taken out. Find $P(\text{red next})$. $\frac{2}{7}$ without replacement: one fewer	h A bag has 3 red, 5 blue counters. Take two, not replaced. Find $P(\text{both red})$. $\frac{3}{28}$ both, without replacement
i A bag has 3 red, 5 blue counters. Take two, not replaced. Find $P(\text{same colour})$. $\frac{13}{28}$ same colour: two routes, not replaced	j A fair coin is flipped 3 times. Find $P(3 \text{ heads})$. $\frac{1}{8}$ three events in a row	k A fair coin is flipped 3 times. Find $P(\text{at least one head})$. $\frac{7}{8}$ at least one in three events	l Independent events: $P(A) = 0.4$, $P(A \text{ and } B) = 0.12$. Find $P(B)$. 0.3 working backwards: divide

The Maths Habit