GCSE HIGHER · REVISION MAT 1

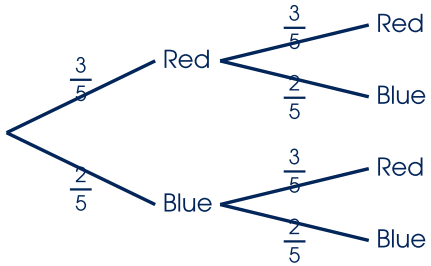
Combined events

1 A coin is flipped and a fair dice is rolled.

Find the probability of a head and a 6.

2 A bag has 3 red and 2 blue counters.

A counter is taken, replaced, and another is taken.



Find P(red, red).

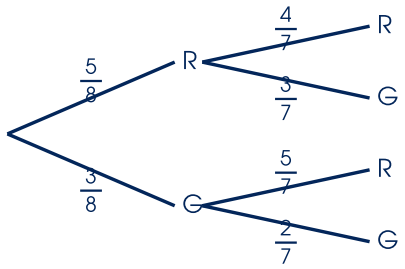
3 Explain why P(A and B) = P(A) × P(B) when A and B are independent.

4 P(rain on Monday) = 0.3 and P(rain on Tuesday) = 0.4, independently.

Find the probability that it rains on exactly one day.

5 A bag has 5 red and 3 green sweets.

Two are taken without replacement.



Show that P(both red) = $\frac{5}{14}$.

6 A bag has 5 red and 3 green sweets.

Two are taken without replacement.

Find P(at least one green).

7 A bag has 5 red and 3 green sweets.

Two are taken without replacement.

Show that P(same colour) = $\frac{13}{28}$.

8 A bag has n red and 3 blue counters.

Two are taken without replacement.

P(both blue) = $\frac{1}{15}$.

Find n.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Combined events

1 $\frac{1}{2} \times \frac{1}{6}$

$\frac{1}{12}$

2 $\frac{3}{5} \times \frac{3}{5}$

$\frac{9}{25}$

3 The outcome of A does not change the probability of B.

4 $0.3 \times 0.6 + 0.7 \times 0.4$

0.46

5 $\frac{5}{8} \times \frac{4}{7} = \frac{20}{56}$

$= \frac{5}{14}$

6 $1 - \frac{5}{14}$

$\frac{9}{14}$

7 $\frac{20}{56} + \frac{6}{56} = \frac{26}{56}$

$= \frac{13}{28}$

8 $\frac{3}{n+3} \times \frac{2}{n+2} = \frac{1}{15}$

$(n + 3)(n + 2) = 90$

$n^2 + 5n - 84 = 0$

$n = 7$

Mr&Mrs MATHS