GCSE FOUNDATION · REVISION MAT 5

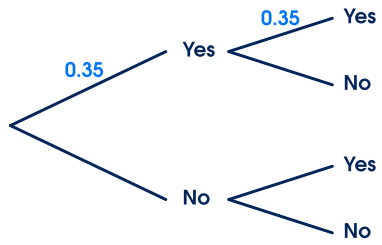
Combined events

1 The probability that a light is red is 0.5.
The probability that the next light is red is 0.35.
The events are independent.

Work out the probability that both happen.

2 The same event happens twice. Each time P(Yes) = 0.35.

Complete the probability tree diagram.



3 Explain why choosing a day of the week and rolling a dice are independent events.

4 A bag has 3 red and 7 blue counters. A counter is taken, then put back. A second counter is taken.

Show that P(both red) = $\frac{9}{100}$.

5 P(Amy passes) = 0.9. P(Ben passes) = 0.2. The events are independent.

Work out the probability that exactly one of them passes.

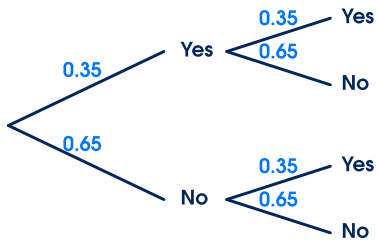
6 A bag has 7 red and 3 blue sweets. Kim takes a sweet and eats it. She then takes another.

Work out the probability that both sweets are red.

Mr&Mrs MATHS

1 $0.5 \times 0.35 = \mathbf{0.175}$

2



3 The result of choosing a day of the week does not affect the result of rolling a dice.

ANSWERS · REVISION MAT 5

Combined events

4 $\frac{3}{10} \times \frac{3}{10} = \frac{\mathbf{9}}{\mathbf{100}}$ ✓

5 Amy only: $0.9 \times 0.8 = 0.72$
Ben only: $0.1 \times 0.2 = 0.02$

Total = **0.74**

6 $\frac{7}{10} \times \frac{6}{9} = \frac{42}{90}$

$= \frac{\mathbf{7}}{\mathbf{15}}$

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