GCSE FOUNDATION · REVISION MAT 4

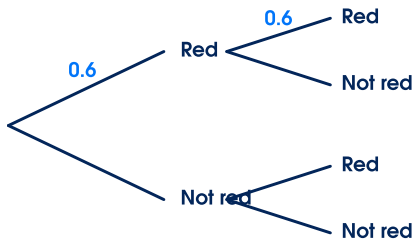
Combined events

1 The probability that Amy wins her match is 0.6. The probability that Ben wins his match is 0.45. The events are independent.

Work out the probability that both happen.

2 The same event happens twice. Each time P(Red) = 0.6.

Complete the probability tree diagram.



3 Explain why taking a card and putting it back and taking another card are independent events.

4 A bag has 5 red and 3 blue counters. A counter is taken, then put back. A second counter is taken.

Show that P(both red) = $\frac{25}{64}$.

5 P(Amy passes) = 0.25. P(Ben passes) = 0.6. The events are independent.

Work out the probability that exactly one of them passes.

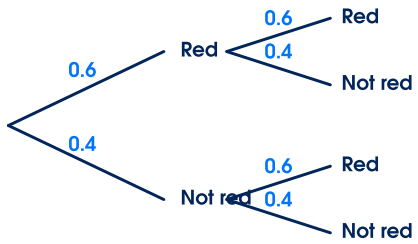
6 A bag has 3 red and 5 blue sweets. Kim takes a sweet and eats it. She then takes another.

Work out the probability that both sweets are red.

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1 $0.6 \times 0.45 = \mathbf{0.27}$

2



3 The result of taking a card and putting it back does not affect the result of taking another card.

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Combined events

4 $\frac{5}{8} \times \frac{5}{8} = \mathbf{\frac{25}{64}}$ ✓

5 Amy only: $0.25 \times 0.4 = 0.1$
Ben only: $0.75 \times 0.6 = 0.45$

Total = **0.55**

6 $\frac{3}{8} \times \frac{2}{7} = \frac{6}{56}$

$= \mathbf{\frac{3}{28}}$

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