

Push Tasks Answers



1. $13 + 4 - 1 = 16$ (King of Hearts counted once). $\frac{16}{52} = \frac{4}{13}$

2. 36 outcomes. 6 matching pairs:
 $\frac{6}{36} = \frac{1}{6}$

3. $0.35 \times 20 = 7$

4. Theoretical probability is a long-run expectation, not a guarantee for a few trials.

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5. $1 - (0.2 + 0.3 + 0.1 + 0.15) = 0.25$

6. Cards aren't replaced, so how many Kings remain (3 or 4) depends on the first card.

7. The die may be biased/unfair.

8. Independent: e.g. coin flips.
Dependent: e.g. cards with no replacement.

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9. Not correct:

$P(\text{win at least once}) = 1 - 0.5^2 = 75\%$, not 100%.

10. $P = \text{favourable} \div \text{total}$; both counts are ≥ 0 , so P can't be negative.

11. $0.3 + 0.45 = 0.75$

12. $\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$