

Form 5 - Test 2 (With answers)

Probability

- The probability of raining tomorrow is $\frac{2}{5}$.
 - What is the probability of it not raining tomorrow? **Answer: $\frac{3}{5}$**
 - Is it more likely to rain or not to rain tomorrow? **Answer: More likely NOT to rain**
- A coin is tossed and a die is thrown. List all the possible outcomes.
(1,1), (1,2), (1,3), (1,4), (1,5), (1,6), (2,1), (2,2), (2,3), (2,4), (2,5), (2,6), (3,1), (3,2), (3,3), (3,4), (3,5), (3,6), (4,1), (4,2), (4,3), (4,4), (4,5), (4,6), (5,1), (5,2), (5,3), (5,4), (5,5), (5,6), (6,1), (6,2), (6,3), (6,4), (6,5), (6,6)
- Each letter of the word 'MATHEMATICS' is written on a separate card. The 11 cards are placed face downwards. A card is drawn at random.
What is the probability of picking a card with
 - the letter C **1/11**
 - the letter A **2/11**
 - a vowel **4/11**
 - a consonant **7/11**
- A bag contains 50 discs numbered 1 to 50. A disc is selected at random.
Find the probability that the number on the disc is
 - is an even number **1/2**
 - an odd number **1/2**
 - has the digit 1 **7/25**
- Given that events A and B are such that $P(A) = 0.6$, $P(B) = 0.5$ and $P(A \cap B) = 0.3$.
 - Represent the above information on a Venn diagram.
 - Determine whether the events A and B are independent or not. **Independent**
 - Determine $P(A \cup B)'$ **0.3**
 - Determine $P(A' \cap B')$ **0.3**
 - Determine $P(A|B)$ **0.6**
 - Are the events A and B mutually exclusive? **NO $\because A \cap B \neq \emptyset$**

6. A red die and a blue die are rolled and the score on the uppermost face of each are recorded.

(a) Draw an appropriate diagram to show all the possible outcomes.

(b) What is the probability that the sum of the scores equal to 12. **1/36**

(c) What is the probability that the product of the scores equal to 15. **1/18**

(d) What is the probability that the product of the scores equal 12. **1/9**