Multiple choice questions - Probability: sample spaces and Venn diagrams

Year: Year 9 · 10

Question 1 A fair die is rolled. The probability of a number greater than 4 is:

- ◯ **A.** 1/3
- ◯ **B.** 1/2
- ◯ **C.** 2/3
- ◯ **D.** 1/6

Question 2 P(A) = 0.35. P(not A) is:

- ◯ **A.** 0.35
- ◯ **B.** 0.65
- ◯ **C.** 1.35
- ◯ **D.** 0.5

Question 3 How many outcomes are in the sample space for two coins?

- ◯ **A.** 2
- ◯ **B.** 3
- ◯ **C.** 4
- ◯ **D.** 8

Question 4 A ∩ B means:

- ◯ **A.** in A or B
- ◯ **B.** in both A and B
- ◯ **C.** not in A
- ◯ **D.** in A only

Question 5 A ∪ B means:

- ◯ **A.** in both
- ◯ **B.** in A or B or both
- ◯ **C.** in neither
- ◯ **D.** in A only

Question 6 n(A) = 10, n(B) = 8, n(A ∩ B) = 3. n(A ∪ B) =

- ◯ **A.** 18
- ◯ **B.** 21
- ◯ **C.** 15

- ◯ **D.** 5

Question 7 Probabilities of all outcomes add up to:

- ◯ **A.** 0
- ◯ **B.** 0.5
- ◯ **C.** 1
- ◯ **D.** 100

Question 8 P(total 7) with two dice is:

- ◯ **A.** 1/12
- ◯ **B.** 1/6
- ◯ **C.** 7/36
- ◯ **D.** 1/7

Question 9 Which event is impossible?

- ◯ **A.** rolling a 7 on a die
- ◯ **B.** rolling a 1
- ◯ **C.** rolling an even number
- ◯ **D.** rolling a 6

Question 10 A spinner is spun 80 times with P(blue) = 3/8. Expected blues:

- ◯ **A.** 24
- ◯ **B.** 30
- ◯ **C.** 27
- ◯ **D.** 40

Answer grid - Probability: sample spaces and Venn diagrams

Year: Year 9

Question	Answer	Explanation
1	**A**	5 and 6: 2/6.
2	**B**	1 - 0.35.
3	**C**	HH, HT, TH, TT.
4	**B**	Intersection.
5	**B**	Union.
6	**C**	10 + 8 - 3.
7	**C**	They total 1.
8	**B**	6 ways in 36.
9	**A**	A standard die only has 1 to 6.
10	**B**	80 × 3/8.