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| Year  9 | | One and Two Stage Chance Events Practice Test | | Calculator |
| Short Answer Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this Practice Test paper. | | | |
|  | **Questions 1 to 4 refer to the table below.**  Jack asked 50 friends what their favourite film genre was. | | | |
| 1. | What is the relative frequency for Drama?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 2. | If one person is chosen at random, what is the probability that their favourite is Thrillers or Horror?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 3. | If one person is chosen at random, what is the probability that their favourite isn’t Romance?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 4. | If one person is chosen at random, what is the probability that that their favourite isn’t Thrillers of Horror?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 5. | A spinner in a board game is in the shape of an octagon, with each section white, blue or green, as shown. On one spin, what is the probability that the pointer doesn’t stop on green?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
|  | **Questions 6 – 8 refer to the following information**.  In a game of Lotto 42 different coloured balls placed in a container.  We know that 12 are red, 18 are black and the rest are yellow.  **One ball is drawn out.** | | | |
| 5. | What is the probability that it is yellow?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 6. | What is the probability that it is not black?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 7. | What is the probability that it is red or black?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
|  | **Question 8 – 10 refer to the following:**  Two normal six sided dice are rolled in a board game. Jamie-Lee starts to draw up a table to show the possible outcomes.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | 1 | 2 | 3 | 4 | 5 | 6 | | 1 | 1,1 | 2,1 | 3, 1 | 4, 1 |  |  | | 2 | 1,2 | 2,2 | 3, 2 | 4,2 |  |  | | 3 | 1,3 | 2,3 | 3, 3 | 4,3 |  |  | | 4 | 1,4 | 2,4 | 3, 4 | 4,4 |  |  | | 5 | 1,5 | 2,5 | 3, 5 | 4,5 |  |  | | 6 | 1,6 | 2,6 | 3, 6 | 4,6 |  |  | | | | |
| 8. | Complete the table for her. | | | |
| 9. | To start the game she needs a double (both dice showing the same number). What is the probability of rolling a double on her first turn?    ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 10. | To finish she needs to roll a total of 8. What is the probability that she rolls 8 on her first attempt?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
|  | **Questions 11 – 14 refer to the following.**  When planning to paint her room using 2 colours, Leica cannot make up her mind from 4 colours, so she puts the 4 colour samples face down on the table and randomly chooses the wall colour first and then the ceiling colour. A tree diagram has been started to show the possible combinations. | | | |
| 11. | Complete the tree diagram. | | | |
| 12. | What is the probability that she has Beige on the walls and Lime on the ceiling?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 13. | What is the probability that the two colours are Beige and Lime in either combination?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 14. | What is the probability that White is not one of the colours?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |

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| Year  9 | | One and Two Stage Chance Events Practice Test | | Calculator |
| Multiple Choice Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Mark all your answers on the accompanying multiple choice answer sheet, not on this Practice Test paper. You may do any working out on this Practice Test paper. Calculators are allowed for this section. | | | |
| 1. | In a chess tournament, Vlad is given a 60% chance of winning. The other four players Costa, Ivana, Katarina and Sven are equally likely to win. What is the probability that Katarina wins the tournament?  A. 5% B. 10% C. 20% D. 40% | | | |
|  | **Questions 2 and 3 refer to the following:**  Athletes are measured for dehydration at the end of a distance event and asked if they drank water on the way. The results are shown in the table.   |  |  |  |  | | --- | --- | --- | --- | |  | Drinks Water | Doesn’t drink Water | Total | | Suffers Dehydration | 12 | 11 | 23 | | Doesn’t suffer dehydration | 26 | 1 | 27 | | Total | 38 | 12 | 50 | | | | |
| 2. | Based on these results, the probability of suffering dehydration if you drink water is:  A.  B.  C.  D. | | | |
| 3. | Which statement is incorrect?  A. If you drink water you still have close to a 1 in 3 chance of suffering dehydration.  B. If you drink water you are more likely to suffer dehydration.  C. You are almost certain to suffer dehydration if you don’t drink water.  D. You can reduce the likelihood of suffering dehydration of you drink water. | | | |
| 4. | Which of the following always has a probability of  ?  A. Drawing a blue card from a pack of 6 blue and 9 red cards.  B. Jo or Sue winning a running race with only three competitors.  C. Rolling a number less than 5 on a standard die.  D. Rolling a number greater than 3 on a standard die. | | | |
| 5. | After 4 rolls of a normal die, a 6 has appeared each time. What is the probability that a 6 will appear on the 5th roll?  A.  B.  C.  D. | | | |
| 6. | A container holds 9 red marbles, 2 green marbles and 1 purple marble.  Which point on the number line would represent the probability of drawing a red marble from the container?  A. B. C. D. | | | |
|  | Questions 7 – 9 refer to the following.  A spinner has three colours; scarlet, gold and cobalt. In a role play game, it is spun twice for each turn. The tree diagram shows the possible outcomes. | | | |
| 7. | What is the probability that both spins land on the same colour?  A.  B.  C.  D. | | | |
| 8. | What is the probability that at least one of the spins lands on gold?  A.  B.  C.  D. | | | |
| 9. | What is the probability that Scarlet is not one of the colours it lands on in either spin?  A.  B.  C.  D. | | | |
| 10. | A four sided die is rolled twice. The possible outcomes are:  1,1 1,2 1,3 1,4 2,1 2,2 2,3 2,4  3,1 3,2 3,3 3,4 4,1 4,2 4,3 4,4  What is the probability that the total of the dice is less than 6?  A.  B.  C.  D. | | | |

One and Two Stage Chance Events Practice Test

Multiple Choice Section

Answer Sheet

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

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| Year  9 | | One and Two Stage Chance Events Practice Test | | Calculator |
| Longer Questions | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this Practice Test paper.  Calculators are allowed for this section. | | | |
| 1. | (a) (2 marks) A group of 3 friends have two tickets for a concert. They write their names (Casey, Deanne and Eloise) on slips of paper and draw two names out to see who uses the tickets. Draw a tree diagram to show the possible outcomes.  (b) (1 mark) What is the probability that Casey and Eloise are chosen (in any order)?  ...................................................................................................................................  ...................................................................................................................................  (c) (1 mark) What is the probability that Eloise is not chosen?  ...................................................................................................................................  ................................................................................................................................... | | | |
| 2. | (a) (2 marks) A computer technician analyses his recent callouts and comes up with the two way table that indicates if a problem was with the software or hardware, and whether it could be repaired onsite or needed to go back to the workshop. Complete the totals for the table.   |  |  |  |  | | --- | --- | --- | --- | |  | Software problem | Hardware problem | TOTALS | | Fixed  onsite | 23 | 8 |  | | Taken to  workshop | 7 | 12 |  | | TOTALS |  |  |  |     He uses the table to work out probabilities of certain outcomes.   1. (1 mark) What is the probability that a callout is a hardware problem that can be fixed onsite?     ...................................................................................................................................  ...................................................................................................................................   1. (1 mark) Given that a callout is a hardware problem, what is the probability that it can be fixed onsite?   ...................................................................................................................................  ................................................................................................................................... | | | |