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| Year  8 | Mathematics Practice Test –  Further Probability | **Non Calculator Practice Test** |
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|  | Spinner Prob.jpgQuestion 1 to 5 refer to a spinner used in a board game which has 8 equal divisions, numbered from 1 to 8. |
| 1. | Complete the sample space for the spinner, which has been started below. |
| 2. | What is the probability (as a fraction) of the spinner stopping on the number 6?  P( 6 )= |
| 3. | What is the probability of the spinner stopping on a number larger than 6?  P( number > 6) = |
| 4. | What is the probability of the spinner stopping on a number other than 6?  P( not 6) = |
| 5. | What is the probability of the spinner stopping on a number which is even and smaller than 7?  P(even and < 7) = |
|  | Questions 6 to 9 refer to the ten letter tiles from a word game which have been used to make the word below. One tile is chosen at random from those shown. |
| 6. | List the sample space in alphabetical order. |
| 7. | What is the probability that the tile chosen is the letter N?  P(N) = |
| 8. | What is the probability that the tile chosen is not the letter E?  P(not E) = |
| 9. | What is the probability that the tile chosen is the letter X or the letter C?  P(X or C) = |
| 10. | The chance of a meteorite hitting the earth near you on the way home today could be described as :  Very likely. Impossible. Certain Very Unlikely |
| 11. | What is the probability of a coin showing Heads when it is tossed?  0.2 0.4 0.5 0.6 |
| 12. | Five hundred tickets are sold in a raffle. If you purchase 5 tickets, what are your chances of **not** winning the raffle? |
| 13. | A letter is chosen from the word OUTCOME. What is the probability that it is a not a vowel?    P(not a vowel) = |
|  | Questions 14 to 17 refer to the table below, which shows the results of a survey of eye colours of a random sample of 40 people. |
| 14. | Complete the relative frequency column for Hazel and Black. |
| 15. | What is the probability, if one person from the sample were chosen at random, that their eye colour would be Green or Blue?  .  P(Green or Blue ) = |
| 16. | One eye colour was twice as likely to occur as another colour in the sample. Which two colours were they?  Blue and Black Blue and Hazel  Green and Black Hazel and Black |
| 17. | What is the probability, if one person from the sample were chosen at random, that their eye colour would not be Blue?  .  P(not Blue ) = |
|  | Questions 18 to 20 refer to the table below showing the sport choices of a class of 20 students.  **Sport**  Football  **Frequency o**  Basketball  3  8  Hockey  5  Tennis  4  **One student from the class is chosen at random.** |
| 18. | What is the probability that the student plays Hockey?  P(Hockey) = |
| 19. | What is the probability that the student plays Hockey or Basketball?  P(Hockey or Basketball) = |
| 20. | What is the probability that the student does **not** play Basketball?  P(not Basketball) = |
| 21. | A letter is chosen at random from the word REFERENCES. What is the probability it is the letter E? |
| 22. | A special 6 sided die has its faces painted red and black. It is twice as likely to land on red as on black. How many of its faces are red?  2 3 4 6 |
| 23. | In Jonesville, garbage is collected on 5 days, from Monday to Friday. What is the probability that the garbage is collected at a random address on a Monday or a Tuesday?  0.2 0.4 0.5 0.8 |
| 24. | The probability that Aaron wins a game is  . What is the probability Aaron doesn’t win the game? |
| 25. | A bag contains 3 blue, 4 red and 5 yellow marbles. What is the probability of selecting a marble which is not red or blue?  P(not Red or Blue) = |
| 26. | One card is selected from a normal pack of 52 playing cards. What is the probability of it not being a 7? |
|  | Questions 27 to 31 refer to the Venn diagram below.  In a class of 30 students, some play music and some play sport, the Venn diagram shows the numbers who do each.  **A student is chosen at random from the class.** |
| 27. | What is the probability that the student plays sport? |
| 28. | What is the probability that the student plays both sport and music? |
| 29. | What is the probability that the student plays either sport or music or both? |
| 30. | If we know that the student plays sport, what is the probability that they also play music? |
| 31. | What is the probability that the student doesn’t play music? |
|  | Questions 32 to 36 refer to the Venn diagram below.  Kayla has a collection of 40 jewellery beads. Some have glass sections, some are silver and some are made by the Venus company.  **A bead is chosen at random from the collection.** |
| 32. | What is the probability that the bead is silver? |
| 33. | What is the probability that the bead is silver and made by Venus? |
| 34. | What is the probability that the bead is either silver or has a glass section or both? |
| 35. | If we know that the bead is made by Venus, what is the probability it is silver? |
| 36. | What is the probability that the bead isn’t made by Venus? |
|  | Questions 37 to 40 refer to the two way table below, which shows the makeup of a soccer club’s membership.  **One person is chosen at random from the club membership.** |
| 37. | What is the probability that the person is a male? |
| 38. | What is the probability that the person is a junior male? |
| 39. | What is the probability that the person is either a senior or a female (or both)? |
| 40. | If it known that the person is male, what is the probability that he is a junior? |