|  |  |  |  |
| --- | --- | --- | --- |
|  | TREE DIAGRAMS | | |
| 1. | Two boxes each contain 6 petunia plants that are not yet flowering. Box A contains 2 plaints that will have purple flowers and 4 plants that will have white flowers. Box B contains 5 plants that will have purple flowers and 1 plant that will have white flowers. A box is selected by tossing a coin, and one plant is removed at random from it.   1. Draw a tree diagram to show all outcomes. 2. Determine the probability it will have purple flowers. | | |
| 2. | The probability of rain during the Kentucky Derby is estimated to be . If it does rain Mudlark will be the favorite to win the race (with a probability of ). If it does not rain then he only has a 1 in 20 chances of winning.   1. Make a tree diagram to show all outcomes. 2. Determine the probability that Mudlark wins! | | |
| 3. | Carl’s car will only start 80% of the time and his motorcycle will only start 60% of the time.   1. Draw a tree diagram to illustrate this situation. 2. Use the diagram to find the probability that: 3. Both will start 4. Carl can only use his car. | | |
| 4. | A container holds 10 green, 15 red, and 25 yellow objects. Suppose someone removes 3 objects (without replacing them). Make a Tree Diagram and find the following: | | |
|  | VENN DIAGRAMS | | |
| 5. | Describe the Shaded Regions Using Set Notation: | | |
|  |  |  |  |
|  |  |  |
| 6. | Shade in the Regions Described: | | |
|  | Shade: | Shade: | Shade: |
| 7. | In a class of 60 students, 35 students study Music and 40 students study Art. 25 students study both.   1. Make a Venn Diagram Showing Tabulation of all areas. (M=Music, A=Art) 2. Make a Venn Diagram Showing the Probabilities of all areas. 3. For a randomly selected student find 4. For a randomly selected student find 5. For a randomly selected student find 6. Find | | |
| 8. | Refer to the venn diagram at the right. Let S=sophomore and A =In advanced algebra. Find the following probabilities and explain their meaning: | | |