1. List the elements of each of the following sample spaces:
2. the set of integers between 1 and 50 and divisible by 8;
3. the set S = {x|x2 + 4x – 5 = 0};
4. the set of outcomes when a coin is tossed until a tail or three heads appear;
5. the set S = {x|x is a continent};
6. the set S = {x|2x – 4 ≥ 0 and x < 1}.
7. Use the rule method to describe the sample S consisting of all points in the first quadrant inside a circle of radius 3 with center at the origin.
8. Which of the following events are equal?
9. A = {1, 3};
10. B = {x|x is a number on a die};
11. C = {x|x2 – 4x + 3 = 0};
12. D = {x|x is the number of heads when six coins are tossed}.
13. An experiment involves tossing a pair of dice, 1 green and 1 red, and recording the numbers that come up. If x equals the outcome on the green die and y the outcome on the red die, describe the sample space S
14. by listing the elements (x, y);
15. by using the rule method.
16. An experiment consists of tossing a die and then flipping a coin once if the number on the die is even. If the number of the die is odd, the coin is flipped twice. Using the notation 4H, for example, to denote the outcome that the die comes up 4 and then the coin comes up heads, and 3HT to denote the outcome that the die comes up 3 followed by a head and then a tail on the coin, construct a tree diagram to show the 18 elements of the sample space S.