

Probability

May 2, 2009

Exercises

1. When a card is drawn from an ordinary deck, find the probability of getting
 - (a) A jack;
 - (b) A 4;
 - (c) A card less than 6 (an ace is considered above 6);
 - (d) A 5 or a heart;
 - (e) A 5 and a heart;
 - (f) A king
 - (g) A red card.
2. A box of candy contains six chocolate-covered cherries, three peppermint patties, two caramels, and two strawberry creams. If a piece of candy is selected at random, find the probability of getting a caramel or a peppermint patty.
3. A family has three children.
 - (a) Write down the sample space for the genders of the children;
 - (b) Find the probability that all the children are girls;
 - (c) Find the probability that all the children are girls if it is known (or given) that at least one of the children is a girl.
4. During a sale at a men's store, 16 white sweaters, three red sweaters, nine blue sweaters, and seven yellow sweaters were purchased. If a customer is selected at random, find the probability that he bought
 - (a) A blue sweater;
 - (b) A red, blue or a yellow sweater;
 - (c) A sweater that was not white.
5. Three cards are drawn from an ordinary deck *without* replacement. Find the probability of getting

- (a) All red cards
- (b) All spades
- (c) All queens.