1.27 A person has purchased 10 of 1,000 tickets sold in a certain raffle. to determine the five prize winners, 5 tickets are drawn at random and without replacement. Compute the probability that this person will win at least one prize.

Hint: First compute the probability that he does not win a prize

Solution: Let N denote the event that the person will not win any prize. Then

Pr(*N*) =

The probability of purchasing 10 non–winning tickets.

Pr(*N*) =

=

=

The probability of the person winning at least one of the prizes is

Pr( ) = 1 − Pr(*N*)

= 1 − 0.9509

= 0.049