**Worksheet 4 – Chapter 3**

1. Cross Country Bicycles makes two mountain bike models that each comes in three colors. The following table shows the production volumes for last week: ( 4 decimal places) – Use proper notation

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Color** | | |
| **Model** | **Blue** | **Brown** | **White** |
| **XB-50** | 302 | 105 | 200 |
| **YZ-99** | 40 | 205 | 130 |

1. Based on the table, what is the probability that a manufactured item is brown?
2. What is the probability that the product manufactured is a YZ-99?
3. What is the probability that a product manufactured is a YZ99 and brown?
4. Suppose a product was chosen at random. Consider the following two events: the event that model YZ-99 was chosen and the event that a white product was chosen. Are these two mutually exclusive? Explain.
5. Use the Addition Rules to find the following probabilities of the event indicated for parts (a) – (f) use P(E) = 0.25 and P(F) = 0.45.
   1. Find P(E or F) if P(E and F) = 0.15.
   2. Find P(E and F) if P(E or F) = 0.6
   3. Find P(E or F) if E and F are mutually exclusive
   4. Find P(E and F) if E and F are mutually exclusive
   5. Find P(EC)
   6. Find P(FC)
   7. If P(E) = 0.6, P(E or F) = 0.85, and P(E and F) = 0.05, find P(F)
   8. If P(F) = 0.30, P(E or F) = 0.65, and P(E and F) = 0.15, find P(E)