* Condition Probability Rules

\[ P(F|E) = \frac{P(E \text{ and } F)}{P(E)} \]

\[ = \frac{N(E \text{ and } F)}{N(E)} \]

General Multiplication Rule
5.4.29 Planting Tulips

A bag of 30 tulip bulbs purchased from a nursery contains 12 red tulip bulbs, 10 yellow tulip bulbs, and 9 purple tulip bulbs. Use a tree diagram to answer the following:

(a) What is the probability that two randomly selected tulip bulbs are both red?

(b) What is the probability that the first bulb selected is red and the second yellow?

(c) What is the probability that the first bulb selected is yellow and the second is red?

(d) What is the probability that one bulb is red and the other is yellow?