

Ex: 17.3

Two balls are drawn at random in succession without replacement from an urn containing 4 Red & 6 black balls. Find the probabilities of all the possible outcomes.

Sol:

Possible Outcomes

$$1) 1 \text{ Red } 1 \text{ black} = \frac{4}{10} \times \frac{3}{9} = \frac{4}{30}$$

$$2) 1 \text{ Red } 2 \text{ black} = \frac{4}{10} \times \frac{6}{9} = \frac{4}{15}$$

$$3) 2 \text{ Red } 1 \text{ black} = \frac{6}{10} \times \frac{5}{9} = \frac{1}{3}$$