Assignment_17.3

Two balls are drawn at a succession from an urn containing 4 red balls and 6 black balls.

∴ In all there are 10 balls.
and there are 10×9 different ways i.e 90 different ways to select two balls.

Now, possible draws are ① RB (Red-black)
② RR (Red-Red) ③ BR (Black-red)
④ BB (Black-Black)

Probability of RB $\Rightarrow \dfrac{4\times6}{10\times9} = \dfrac{24}{90} \cdot \dfrac{12}{45} = 0.2667$

Probability of RR $\Rightarrow \dfrac{4\times3}{10\times9} = \dfrac{12}{90} = \dfrac{6}{45} = 0.1333$

Probability of BR $\Rightarrow \dfrac{6\times4}{10\times9} = \dfrac{24}{90} = \dfrac{12}{45} = 0.2667$

Probability of BB $\Rightarrow \dfrac{6\times5}{10\times9} = \dfrac{30}{90} = \dfrac{1}{3} = 0.3333$