Two balls are drawn at random in succession without replacement from an urn

containing 4 red balls and 6 black balls.

Find the probabilities of all the possible outcomes.

1. Both balls are red = P(R,R)

=4/10\*3/9=2/5\*1/3=2/15=0.1333

1. Both balls are black = P(B,B)

=6/10\*5/9=3/5\*5/9=5/15=0.333

1. One red and one black=P(R,B)+P(B,R)

=(4/10\*6/9)+( 4/10\*6/9)=(4/15)+(4/15)=0.533