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1. An urn contains 4 white, 8 black and 12 green balls. Three balls are withdrawn randomly from this urn and their colour is noted. What is the probability that

   (a) at least two withdrawn balls have the same colour; $\cos/_{2\kappa}$ 3 $1 - (\cdots)$

   (b) at least two distinct coloured balls are withdrawn? ^{218} $1 - (\text{same})$

   (5 Marks) $wu\bigcirc \dashv B B \bigcirc \dashv$

2. A group of 4 people were standing in a line in the order Alice, Bob, Charles and Diana. An onlooker rearranged them at random. What is the probability that

   (a) there are exactly two persons between Alice and Bob; $\frac{1}{\kappa}$

   (b) neither Alice nor Bob are in their original positions? $\frac{2}{\kappa}$

   (5 Marks)

3. There are 3 boxes each containing black (B) and white (W) marbles in the following ratio - first box 1 : 1, second box 1 : 2, third box 1 : 3. A box is selected at random and a marble is withdrawn at random from that box. What is the probability that

   (a) the withdrawn ball is white; $23/_{36}$

   (b) the first box was selected given the fact that the withdrawn marble was black? $6/_{13}$

   (5 Marks) $\frac{1}{2}$

$\frac{1}{3} \kappa / \dashv$
$\frac{1}{2} \dashv \frac{1}{3}$