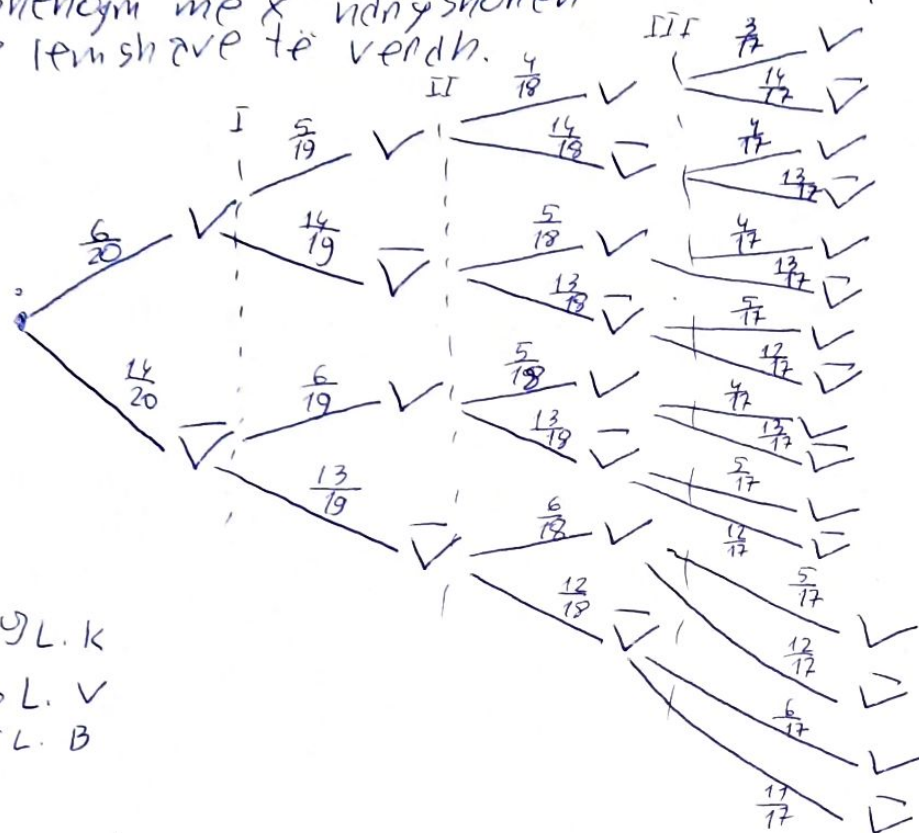Anila Gashi 2b

① Me një kuti ka 9 lemsha të kuq, 6 lemsha të verdh dhe 5 lemsha të bardh. Nëse nga kutia tërhiqen 4 lemsha rradhazi pa mos u kthyer në kuti. shenojm me x ndryshoren e rastit që ka si vlera paraqitjen e lemshave të verdh.

9 L. K
6 L. V
5 L. B

X=0	X=1	X=2	X=3	X=4
0.22	0.45	0.28	0.06	0.003

$$P(x=0) = \overline{V} \cdot \overline{V} \cdot \overline{V} \cdot \overline{V} = \frac{14}{20} \cdot \frac{13}{19} \cdot \frac{12}{18} \cdot \frac{11}{17} = \frac{26208}{116280} = 0.23$$

$$P(x=1) = V \cdot \overline{V} \cdot \overline{V} \cdot \overline{V} + \overline{V} \cdot V \cdot \overline{V} \cdot \overline{V} + \overline{V} \cdot \overline{V} \cdot V \cdot \overline{V} + \overline{V} \cdot \overline{V} \cdot \overline{V} \cdot V =$$

$$= \frac{6}{20} \cdot \frac{14}{19} \cdot \frac{13}{18} \cdot \frac{12}{17} + \frac{14}{20} \cdot \frac{6}{19} \cdot \frac{13}{18} \cdot \frac{12}{17} + \frac{14}{20} \cdot \frac{13}{19} \cdot \frac{6}{18} \cdot \frac{12}{17} + \frac{14}{20} \cdot \frac{13}{19} \cdot \frac{12}{18} \cdot \frac{6}{17} =$$

$$= 4 \cdot \frac{13104}{116280} = 0.45$$

$$P(x=2) = V \cdot V \cdot \overline{V} \cdot \overline{V} + V \cdot \overline{V} \cdot V \cdot \overline{V} + V \cdot \overline{V} \cdot \overline{V} \cdot V + \overline{V} \cdot V \cdot V \cdot \overline{V} +$$
$$\overline{V} \cdot V \cdot \overline{V} \cdot V + \overline{V} \cdot \overline{V} \cdot V \cdot V = \frac{6 \cdot 5460}{116280} = \frac{32760}{116280} = 0.28$$

$$P(x=3) = V \cdot V \cdot V \cdot \overline{V} + V \cdot V \cdot \overline{V} \cdot V + V \cdot \overline{V} \cdot V \cdot V + \overline{V} \cdot V \cdot V \cdot V =$$
$$= \frac{4 \cdot 1680}{116280} = 0.06$$

$$P(x=4) = V \cdot V \cdot V \cdot V = \frac{360}{116280} = 0.003$$

$E(x) = 0 \cdot 0.22 + 1 \cdot 0.45 + 2 \cdot 0.28 + 3 \cdot 0.06 + 4 \cdot 0.003 =$

$= 0 + 0.45 + 0.56 + 0.18 + 0.012 = 1.202$ //

$E(x^2) = 0^2 \cdot 0.22 + 1^2 \cdot 0.45 + 2^2 \cdot 0.28 + 3^2 \cdot 0.06 + 4^2 \cdot 0.03 =$

$= 0 + 0.45 + 1.12 + 0.54 + 0.048 = 2.16$ //

$D(x) = 2.16 - (1.202)^2 = 2.16 - 1.44 = 0.72$ //

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