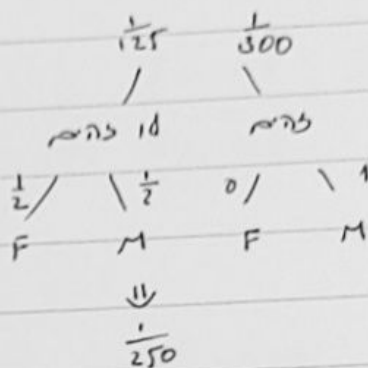
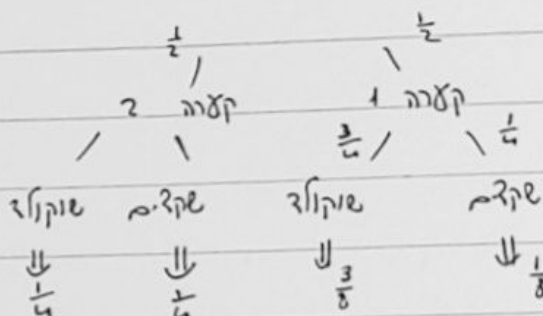


1c פתרון1. כ) $\frac{1}{300}$ - הסיכוי להיות נדון4. $\frac{1}{125}$ - הסיכוי לא להיות נדון

$$\frac{\frac{1}{300}}{\frac{1}{300} + \frac{1}{250}} = \boxed{\frac{5}{11}}$$

2) $\frac{\frac{3}{8}}{\frac{3}{8} + \frac{1}{4}} = \boxed{\frac{3}{5}}$



94 נהג

96 פתרון

$$\frac{\frac{1}{2} \cdot \frac{2}{10} + \frac{1}{2} \cdot \frac{2}{10}}{\frac{1}{2} \cdot \frac{2}{10} + \frac{1}{2} \cdot \frac{2}{10} + \frac{1}{20} + \frac{14}{200}} = \boxed{\frac{5}{8}}$$

94 יחיד 96 נהג

3. כ) A - חולה, $P(A) = \frac{1}{10,000}$

B - נדון

 $P(B/\text{not } A)$ - חולה ולא נדון - False Positive = $\frac{1}{100}$ $P(B/A)$ - נדון חולה = $\frac{99}{100}$

$$P(B) = \underbrace{P(B/A)}_{\text{נדון חולה}} \cdot \underbrace{P(A)}_{\text{חולה}} + \underbrace{P(B/\text{not } A)}_{\text{חולה ולא נדון}} \cdot \underbrace{P(\text{not } A)}_{\text{לא חולה}}$$

$$P(B) = \frac{99}{100} \cdot \frac{1}{10,000} + \frac{1}{100} \cdot \frac{9999}{10,000} = \boxed{0.01}$$

2) $P(A) = \frac{1}{200}$

$$P(B) = \frac{99}{100} \cdot \frac{1}{200} + \frac{1}{100} \cdot \frac{199}{200} = \boxed{0.0149}$$

Random Variables:

1. $3: \{1, 2\}, \{2, 1\}$
 $6: \{1, 5\}, \{5, 1\}, \{2, 4\}, \{4, 2\}, \{3, 3\}$
 $9: \{3, 6\}, \{6, 3\}, \{4, 5\}, \{5, 4\}$

Total = 12

$$12 \cdot \frac{1}{6} \cdot \frac{1}{6} = \frac{12}{36} = \frac{1}{3} \quad - \quad \begin{array}{c} \text{mod 3} \\ 0(\text{mod } 3) \end{array} \quad \begin{array}{c} \text{mod 6} \\ 0(\text{mod } 6) \end{array}$$

$$\frac{1}{3} \cdot 6\$ = 2$$

$$\frac{2}{3} \cdot -3\$ = -2$$

$$2 + (-2) = \boxed{0\$}$$

2. $5 \cdot 5 = 25$

$$12 \cdot 12 = 144$$

$$25 + 144 = 169$$

$$\sqrt{169} = \boxed{13\$}$$

3. $\sqrt{\frac{0.4(1-0.4)}{8}} = \boxed{0.17}$

4. Mean = 26 = μ

standard deviation = 2 = σ

$$P(26 < X < 30) = P(y_1 < y < y_2), \quad y = \frac{x - \mu}{\sigma}$$

$$P(26 < X < 30) = P\left(\frac{26 - 26}{2} < y < \frac{30 - 26}{2}\right) =$$

$$= P\left(\frac{0}{2} < y < \frac{4}{2}\right) = P(0 < y < 2) =$$

$$= P(y < 2) - P(y < 0) = 0.97725 - 0.5$$

$$P(26 < X < 30) = \boxed{0.48}$$

$$5. P(X > 3) = \begin{matrix} \text{למעלה מ-3} \\ \text{למעלה מ-3} \end{matrix} = \frac{1}{2} \cdot \overset{(13)}{2} \cdot \overset{(4)}{0.4} = \boxed{0.4}$$

$$6. \left(\frac{4}{3} \cdot 0.60 \right)^{3 \cdot 0.4} = \boxed{0.76}$$

$$7. \frac{-10 + (-5) + 0 + 5 + 10}{5} = \boxed{0 = X}$$