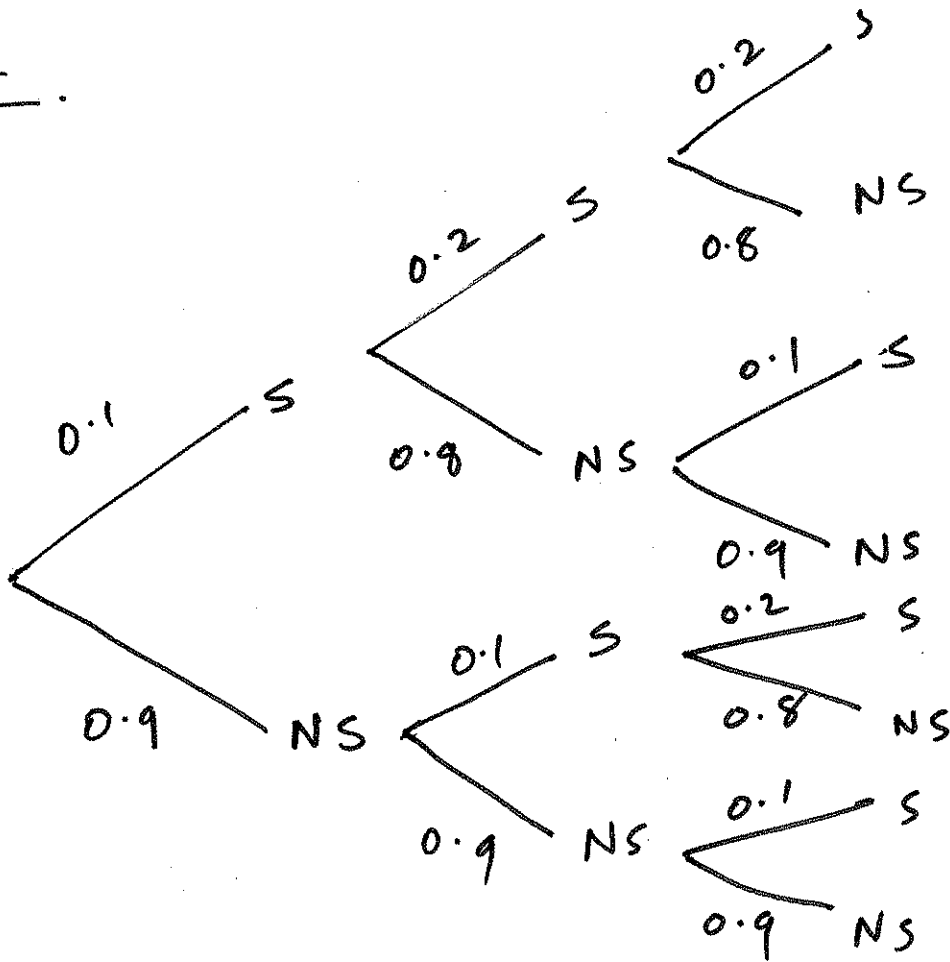


235

42



$\{SSS, SSNS, SNS S, NS, SS\}$

$$(0.1)(0.2)(0.2) + (0.1)(0.2)(0.8) \\ + (0.1)(0.8)(0.1) + (0.9)(0.1)(0.2)$$

245

30

10 boxes.

1 - box $\rightarrow$ 10 - D defective

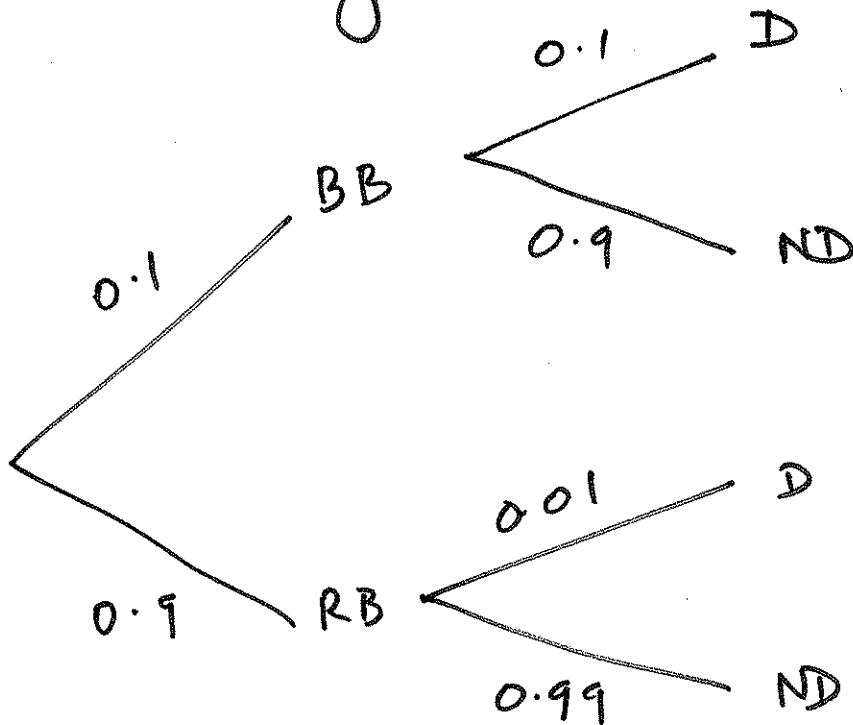
$$D = \frac{10}{100} = 0.1$$

9 box $\rightarrow$ 1 - D - defective

$$D = \frac{1}{100} = 0.01$$

BB - Bad box.

RB = Regular Box.



$$P(BB|DND) = \frac{P(BB \cap DND)}{P(BB) \cdot P(DND|B) + P(RB) \cdot P(DND|RB)}$$

$$= \frac{(0.1)(0.1)(0.9)}{(0.1)(0.1)(0.9) + (0.9)(0.01)(0.99)}$$

5.3

15
6-D
9-ND

$$C(15, 2) = \frac{15 \cdot 14}{2} = 105$$

$$C(6, 2) = \frac{6 \cdot 5}{2} = 15$$

E = both are defective

$P(E) = \frac{C(6, 2)}{C(15, 2)} = \frac{15}{105}$
--

1c.

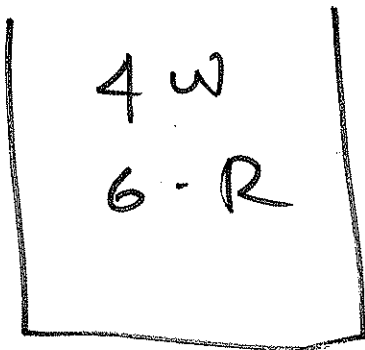
Sample space $C(52, 2) = 1326$

Same suit $C(13, 2) = 78$

$$P(E = \text{Same suit}) = \frac{78}{1326}$$

$$(12) \quad \frac{C(40, 2)}{C(52, 2)}$$

(2)



$$C(10, 5) = 252$$

$$C(4, 3) = 4$$

$$C(6, 2) = 15$$

$$P(3W \& 2R) = \frac{4 \cdot 15}{252} = \frac{5}{21}$$

5/21

OR 3 W & 2 R
4 W & 1 R

$$\rightarrow \frac{C(4,4) \cdot C(6,1)}{252}$$

$$\frac{5}{21} + \frac{C(4,4) \cdot C(6,1)}{252}$$

$$\frac{60}{252} + \frac{6}{252} = \frac{66}{252}$$

26

$$\frac{C(10, 3)}{C(20, 3)} = \frac{2}{19}$$

16

$$\frac{C(4, 3) \cdot C(13, 1) \cdot C(4, 2) \cdot C(12, 1)}{C(52, 5)}$$