

Nandan Navandar
11th

22-8-21

maths - 2

Q1
→ 1) with replacement

$$S = \{(5,5), (5,6), (5,7), (5,8), (6,6), (6,5), (6,7), (6,8), (7,5), (7,6), (7,7), (7,8), (8,6), (8,7), (8,8)\}$$

$$n(S) = 15$$

2) without replacement

$$S = \{(5,6), (5,7), (5,8), (6,5), (6,7), (6,8), (7,5), (7,6), (7,8), (8,6), (8,7), (8,8)\}$$

$$n(S) = 12$$



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$$\rightarrow \text{probability} = \frac{n(A)}{n(S)} = \frac{n(S)}{n(S)} = \frac{52}{52}$$

$$(a) n(A) = 26C_2$$

$$P(A) = \frac{n(A)}{n(S)} = \frac{26C_2}{52C_2}$$

$$b) n(B) = 13C_2$$

$$\frac{n(B)}{n(S)} = \frac{13C_2}{52C_2}$$

$$c) n(C) = 4C_2$$

$$P(C) = \frac{4C_2}{52C_2}$$

$$(d) n(D) = 12C_2$$

$$P(D) = \frac{n(D)}{n(S)} = \frac{12C_2}{52C_2}$$



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$$e) n(e) = 13C_1 + 39C_1$$

$$p(e) = \frac{n(e)}{n(s)}$$

$$= \frac{13C_1 + 39C_1}{52C_1}$$

f) $n(f)$ = Both are spade or club or diamond or heart

$$= 13C_2 \text{ or } 13C_2 \text{ or } 13C_2 \text{ or } 13C_2$$

$$= 4 \cdot 13C_2$$

$$p(f) = \frac{n(f)}{n(s)} = \frac{4 \cdot 13C_2}{52C_2}$$

g) $n(g)$ = Both are of same denomination

$$p(g) = \frac{n(g)}{n(s)}$$

$$= \frac{13 \times 4C_2}{52C_2}$$