Outcome on all three dice is 6 if

1. Outcome on one is 6.

$$P(A/B) = \frac{P(A \cap B)}{P(B)}$$

$$\Rightarrow P(B) = \frac{1}{6}$$

$$P(A/B) = \frac{\frac{1}{6} \times \frac{1}{6} \times \frac{1}{6}}{\frac{1}{6}} = \frac{1}{36}$$

2.

1. $\overline{26} \times \overline{26} \times \overline{26}$
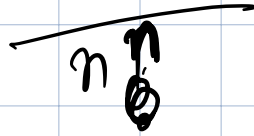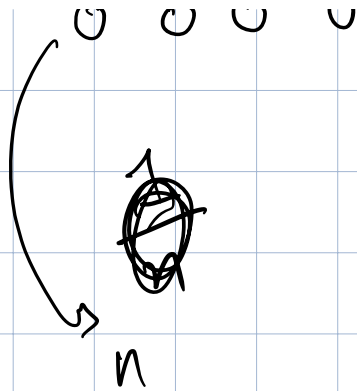
2. $26 \times 26 + 26 \times 26 \times 26$

3.

3

___ ___ ___ ___ $n = 4$
 .   .   .   .

exactly one cell

remains empty.

○ ○ ○ ○ (

○ ○ ○ ○

$n \overset{n}{\underset{\circledcirc}{\uparrow}}$

n

Ang 3)

2019 midterm:

52 cards
↓
13 selected

k pairs "ace and king" from the san

$\cancel{k}$ Suits → 4 suits.

4 pairs are possible.

Rest: $13 - \cancel{k}$

4!

$\dfrac{k=1}{13-1}$ $\overset{\text{suit 1}}{\underset{\circledcirc}{K Q}} - \overset{\text{suit 2}}{\underset{\downarrow}{\overline{Q}}} = \overset{}{\underset{\downarrow}{\overline{I}}}$

$$4 \times 258. \quad \frac{\uparrow R!\,(52-2R)!}{\binom{52}{13}}$$
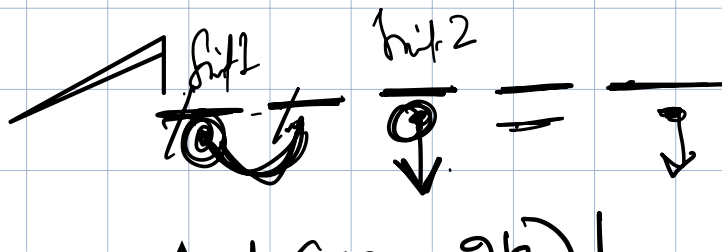
$$\frac{\lambda^{R} e^{-R}}{R!} \qquad (\lambda > 0)$$

Not resolved = P

Practice

	first		second urn
N_1	$\rightarrow$	white marbles	N_2
M_1	$\rightarrow$	black marbles	M

Can 1 $\rightarrow$ white marbles
from urn 1

$$\frac{N_1}{N_1 + M_1}$$

Probability from
obtaining white from second urn:

$$\frac{N_2 + 1\left(\frac{N_1}{N_1 + M_1}\right)}{N_2 + M + 1}$$

4 players. ——> draw 4 cards each

52 cards

Probability that after the swap, all 4 players have all their 4 cards from different suits. ——> $(13, 13, 13, 13)$

Swaps ——> No swap ——> Already have 4 different suits. or 3 people have it.

1 swap. (2 players swap)

2 swaps. (player 1 swap → player 2.

player 3 swap → player 4

Combinations of how this is done

but Max. 2 swaps.

29 Sep.

Mid-Term review

Q1   1-99 each

Q2   In the due question