AFCAT 1 2025

MATHS

PROBABILITY

MCQS

NAVJYOTI SIR

07 Feb 2025 Live Classes Schedule

9:00AM	07 FEBRUARY 2025 DAILY DEFENCE UPDATES	DIVYANSHU SIR
10:00AM	07 FEBRUARY 2025 DAILY CURRENT AFFAIRS	RUBY MA'AM

SSB INTERVIEW LIVE CLASSES

9:30AM	OVERVIEW OF PPDT & PRACTICE	ANURADHA MA'AM

AFCAT 1 2025 LIVE CLASSES

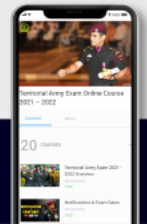
3:00PM	STATIC GK - HIGHEST SMALLEST IN INDIA & WORLD	DIVYANSHU SIR
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 1	ANURADHA MA'AM
5:30PM	MATHS - PROBABILITY	NAVJYOTI SIR

NDA 1 2025 LIVE CLASSES

10:00AM	MATHS - SEQUENCE & SERIES - CLASS 2	NAVJYOTI SIR
11:30AM	POLITY - CLASS 2	RUBY MA'AM
1:00PM	PHYSICS - NUCLEUS & RADIOACTIVITY	NAVJYOTI SIR
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 1	ANURADHA MA'AM

CDS 1 2025 LIVE CLASSES

11:30AM	POLITY - CLASS 2	RUBY MA'AM
1:00PM	HYSICS - NUCLEUS & RADIOACTIVITY	NAVJYOTI SIR
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 1	ANURADHA MA'AM



QUESTION

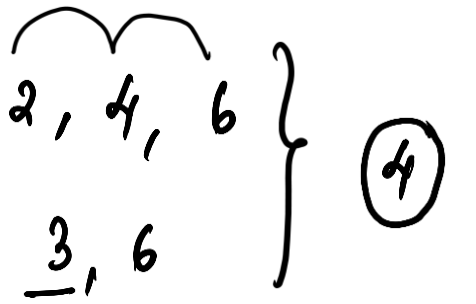
An unbiased die is thrown. What is the probability of getting an even number or multiple of 3 ?

a) $\frac{2}{3}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{1}{6}$



$$\frac{4}{6} = \frac{2}{3}$$

QUESTION

An unbiased die is thrown. What is the probability of getting an even number or multiple of 3 ?

a) $\frac{2}{3}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{1}{6}$

ANSWER : (a)

QUESTION

An unbiased die is thrown. What is the probability of getting an even number and multiple of 3 ?

a) $\frac{2}{3}$

b) $\frac{5}{6}$

c) $\frac{1}{6}$

d) $\frac{1}{2}$

2, 4, 6
3, 6
common for both,

$\frac{1}{6}$

QUESTION

An unbiased die is thrown. What is the probability of getting an even number and multiple of 3 ?

a) $\frac{2}{3}$

b) $\frac{5}{6}$

c) $\frac{1}{6}$

d) $\frac{1}{2}$

ANSWER : (c)

QUESTION

An unbiased die is thrown. What is the probability of getting 3 or 4 ?

a) $\frac{2}{3}$

b) $\frac{4}{6}$

c) $\frac{5}{6}$

d) $\frac{1}{3}$

1, 2, 3, 4, 5, 6

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

QUESTION

An unbiased die is thrown. What is the probability of getting 3 or 4 ?

a) $\frac{2}{3}$

b) $\frac{4}{6}$

c) $\frac{5}{6}$

d) $\frac{1}{3}$

ANSWER : (d)

QUESTION

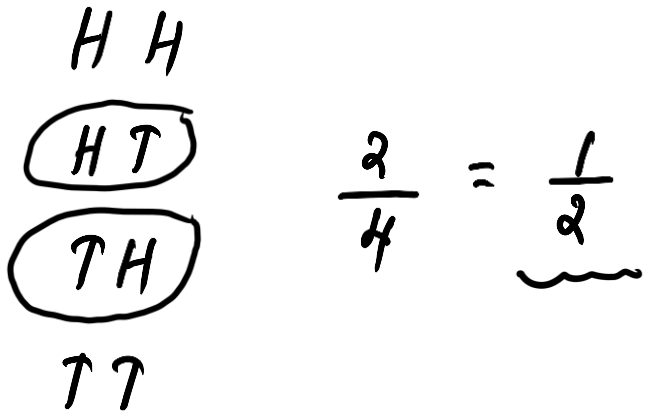
Two unbiased coins are tossed simultaneously. Find the probability of getting one head ?

a) $\frac{3}{2}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{2}{3}$



$\frac{2}{4} = \frac{1}{2}$

QUESTION

Two unbiased coins are tossed simultaneously. Find the probability of getting one head ?

a) $\frac{3}{2}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{2}{3}$

ANSWER : (c)

QUESTION

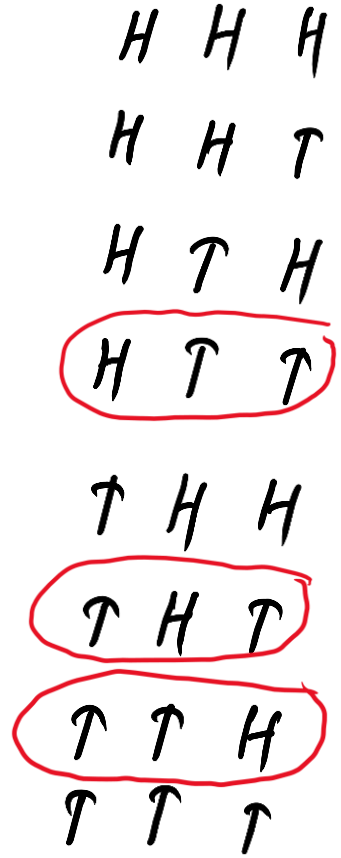
Three unbiased coins are tossed simultaneously. Find the probability of getting one head?

a) $\frac{3}{8}$

b) $\frac{5}{6}$

c) $\frac{1}{2}$

d) $\frac{3}{4}$



$\frac{3}{8}$

QUESTION

Three unbiased coins are tossed simultaneously. Find the probability of getting one head?

a) $\frac{3}{8}$

b) $\frac{5}{6}$

c) $\frac{1}{2}$

d) $\frac{3}{4}$

ANSWER : (a)

QUESTION

Three unbiased coins are tossed simultaneously. Find the probability of getting atleast two tails ?

minimum ⟶ 2 tails + 3 tails

a) $\frac{3}{4}$

b) $\frac{7}{8}$

c) $\frac{1}{8}$

d) $\frac{1}{2}$

H H H

H H T

H T H

H T T

T H H

T H T

T T H

T T T

$\frac{4}{8} = \frac{1}{2}$

QUESTION

Three unbiased coins are tossed simultaneously. Find the probability of getting atleast two tails ?

a) $\frac{3}{4}$

b) $\frac{7}{8}$

c) $\frac{1}{8}$

d) $\frac{1}{2}$

ANSWER : (d)

QUESTION

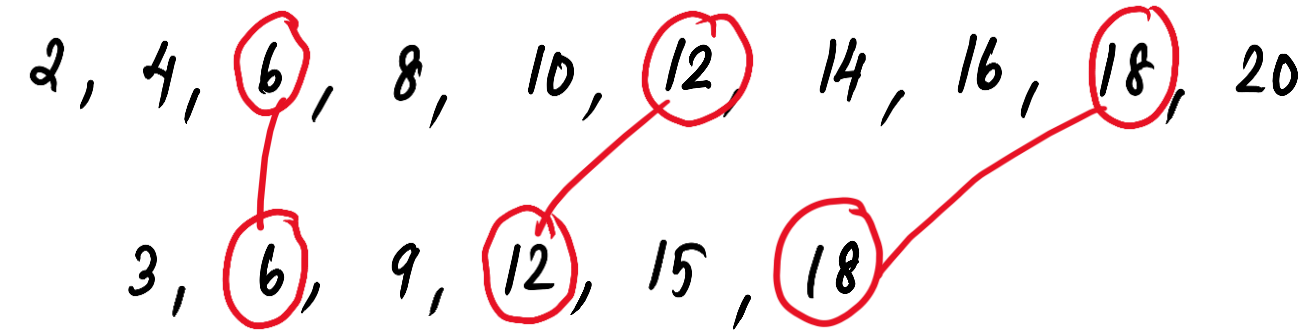
Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is the probability that the ticket has a number which is multiple of 2 or 3 ?

a) $\frac{4}{5}$

b) $\frac{3}{4}$

c) $\frac{13}{20}$

d) $\frac{7}{20}$



$$\frac{10+3}{20} = \frac{13}{20}$$

QUESTION

Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is the probability that the ticket has a number which is multiple of 2 or 3 ?

a) $\frac{4}{5}$

b) $\frac{3}{4}$

c) $\frac{13}{20}$

d) $\frac{7}{20}$

ANSWER : (c)

QUESTION

Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is the probability that the ticket has a number which is multiple of 5 or 7 ?

a) $\frac{3}{10}$

b) $\frac{7}{20}$

c) $\frac{11}{20}$

d) $\frac{4}{5}$

5, 10, 15, 20

7, 14

$\frac{6}{20} = \frac{3}{10}$

QUESTION

Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is the probability that the ticket has a number which is multiple of 5 or 7 ?

a) $\frac{3}{10}$

b) $\frac{7}{20}$

c) $\frac{11}{20}$

d) $\frac{4}{5}$

ANSWER : (a)

QUESTION

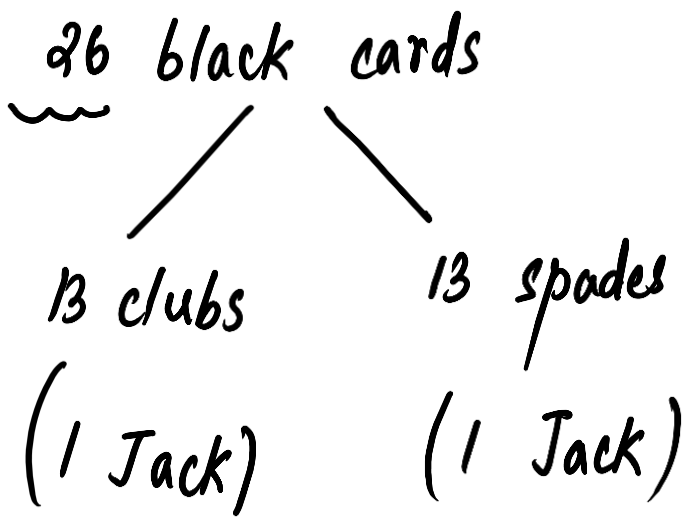
A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is black or jack ?

a) $\frac{1}{13}$

b) $\frac{3}{26}$

c) $\frac{7}{13}$

d) $\frac{1}{2}$



Red cards

2 Jacks (1 diamond + 1 heart)

$$\frac{26+2}{52} = \frac{28}{52} = \frac{7}{13}$$

QUESTION

A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is black or jack ?

a) $\frac{1}{13}$

b) $\frac{3}{26}$

c) $\frac{7}{13}$

d) $\frac{1}{2}$

ANSWER : (c)

QUESTION

A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is '2' of black suit ?

a) $\frac{1}{52}$

b) $\frac{1}{13}$

c) $\frac{1}{26}$

d) $\frac{3}{13}$

'2' of spades or, '2' of clubs

$$\frac{2}{52} = \frac{1}{26}$$

QUESTION

A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is ‘2’ of black suit ?

a) $\frac{1}{52}$

b) $\frac{1}{13}$

c) $\frac{1}{26}$

d) $\frac{3}{13}$

ANSWER : (c)

QUESTION

A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is red face card ?

a) $\frac{1}{13}$

b) $\frac{3}{13}$

c) $\frac{1}{26}$

d) $\frac{3}{26}$

Face card – Jack, Queen or King

Hearts

Diamonds

$$\frac{6}{52} = \frac{3}{26}$$

QUESTION

A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is red face card ?

a) $\frac{1}{13}$

b) $\frac{3}{13}$

c) $\frac{1}{26}$

d) $\frac{3}{26}$

ANSWER : (d)

QUESTION

A bag contains 3 blue marbles and 4 red marbles. One marble is taken out from bag. Find the probability that it is a red marble ?

a) $\frac{3}{5}$

b) $\frac{5}{8}$

$$\frac{4}{3+4} = \frac{4}{7}$$

c) $\frac{2}{7}$

d) $\frac{4}{7}$

QUESTION

A bag contains 3 blue marbles and 4 red marbles. One marble is taken out from bag. Find the probability that it is a red marble ?

a) $\frac{3}{5}$

b) $\frac{5}{8}$

c) $\frac{2}{7}$

d) $\frac{4}{7}$

ANSWER : (d)

QUESTION

A box contains 600 defective bulbs, of which 12 are defective. Find the probability of a bulb drawn from the box is non-defective.

a) 0.96

b) 0.98

c) 0.97

d) None of the above

$$P(\text{non-defective}) = 1 - P(\text{defective})$$

$$= 1 - \frac{12}{600}$$

$$= 1 - \frac{2}{100}$$

$$= \frac{98}{100} = 0.98$$

QUESTION

A box contains 600 defective bulbs, of which 12 are defective. Find the probability of a bulb drawn from the box is non-defective.

a) 0.96

b) 0.98

c) 0.97

d) None of the above

ANSWER : (b)

QUESTION

17 cards numbered 1, 2, 3 … 17 are put in a box and mixed thoroughly. Find the probability of one card drawn at random contains a prime number ?

a) $\frac{1}{5}$

b) $\frac{7}{17}$

c) $\frac{9}{17}$

d) $\frac{11}{17}$

2, 3, 5, 7, 11, 13, 17

$\frac{7}{17}$

QUESTION

17 cards numbered 1, 2, 3 … 17 are put in a box and mixed thoroughly. Find the probability of one card drawn at random contains a prime number ?

a) $\frac{1}{5}$

b) $\frac{7}{17}$

c) $\frac{9}{17}$

d) $\frac{11}{17}$

ANSWER : (b)

QUESTION

The probability of getting a bad egg in a lot of 400 is 0.035. The number of bad eggs in the lot is

a) 7

b) 14

c) 21

d) 28

$0.035 = \frac{35}{1000}$

$\frac{\cancel{35}^{7}}{\cancel{1000}_{\cancel{5}}} \times \cancel{400}^{2} = 7 \times 2 = 14$

QUESTION

If P(A) denotes the probability of an event A, then

(A) $P(A) < 0$ (B) $P(A) > 1$ (C) $0 \leq P(A) \leq 1$ (D) $-1 \leq P(A) \leq 1$

Ans. (c)

QUESTION

The probability that a non leap year selected at random will contain 53 sundays is

(A) $\frac{1}{7}$ (B) $\frac{2}{7}$ (C) $\frac{3}{7}$ (D) $\frac{5}{7}$

$\frac{365}{7} = 52\frac{1}{7}$ (52 weeks + 1 day)

52 Sunday

$\frac{1}{7}$

if leap year $\Rightarrow \frac{2}{7}$

2 days

Sun	Mon	Thur	Fri
Mon	Tue	Fri	Sat
Tue	Wed	Sat	Sun
Wed	Thur		

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MATHS

CLOCKS

MCQS

NAVJYOTI SIR