CDS-AFCAT 1 2025

SSBCrack EXAMS

LIVE

MATHS

PROBABILITY

CLASS 2

NAVJYOTI SIR

17 Oct 2024 Live Classes Schedule

9:00AM	17 OCTOBER 2024 DAILY DEFENCE UPDATES	DIVYANSHU SIR

SSB INTERVIEW LIVE CLASSES

9:30AM	COMPLETE PSYCH TESTS	ANURADHA MA'AM

NDA 1 2025 LIVE CLASSES

1:00PM	BIOLOGY - MCQ - CLASS 8	SHIVANGI MA'AM
4:00PM	MATHS - COMPLEX NUMBERS - CLASS 2	NAVJYOTI SIR
5:30PM	ENGLISH - ANTONYMS - CLASS 2	ANURADHA MA'AM

CDS 1 2025 LIVE CLASSES

1:00PM	BIOLOGY - MCQ - CLASS 8	SHIVANGI MA'AM
5:30PM	ENGLISH - ANTONYMS - CLASS 2	ANURADHA MA'AM
7:00PM	MATHS - PROBABILITY - CLASS 2	NAVJYOTI SIR

AFCAT 1 2025 LIVE CLASSES

4:00PM	STATIC GK - NATIONAL PARKS & WILDLIFE SANCTUARIES	DIVYANSHU SIR
5:30PM	ENGLISH - ANTONYMS - CLASS 2	ANURADHA MA'AM
7:00PM	MATHS - PROBABILITY - CLASS 2	NAVJYOTI SIR

QUESTION

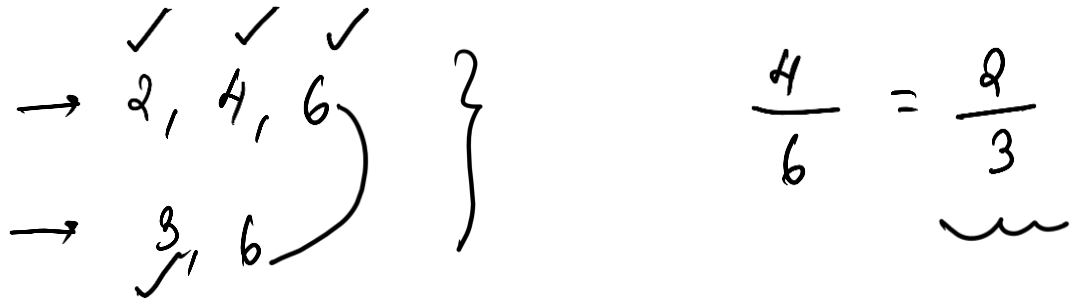
An unbiased die is thrown. What is the probability of getting an even number or multiple of 3 ?

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

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

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

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



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
} and

$\frac{1}{6}$

and → count the common outcomes (favourable outcomes)

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) $\frac{1}{3}$ ✓

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

→ count all outcomes

→ count only once the common ones.

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) $\frac{2}{3}$

H T
H T → (1)
T H → (2)
T T

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

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) $\frac{3}{4}$

H H H
H H T
H T H
H T T —— (1)
T H H
T H T —— (2)
T T H —— (3)
T T T

$\left(\frac{3}{8}\right)$

H T T
T H T
T T H

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

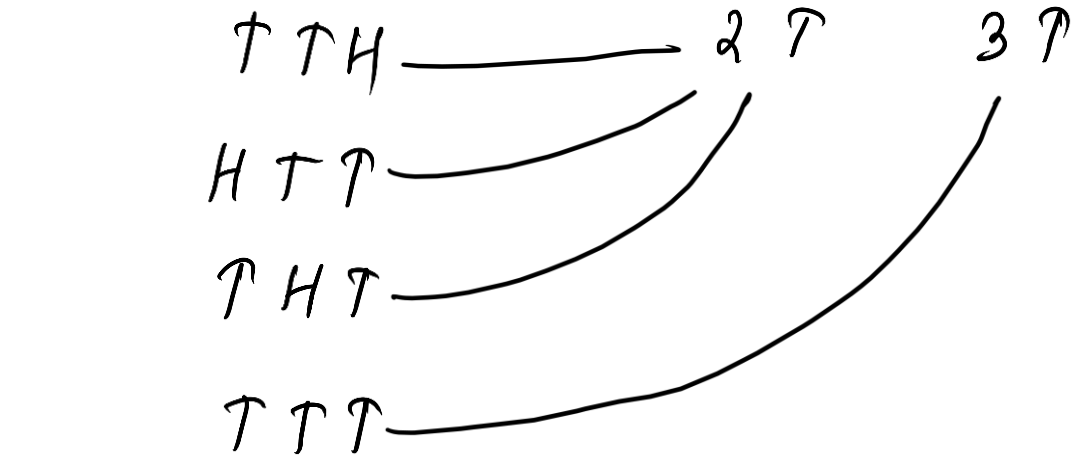
Three unbiased coins are tossed simultaneously. Find the probability of getting atleast two tails ?

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

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

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

d) $\frac{1}{2}$ ✓



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

QUESTION

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

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

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

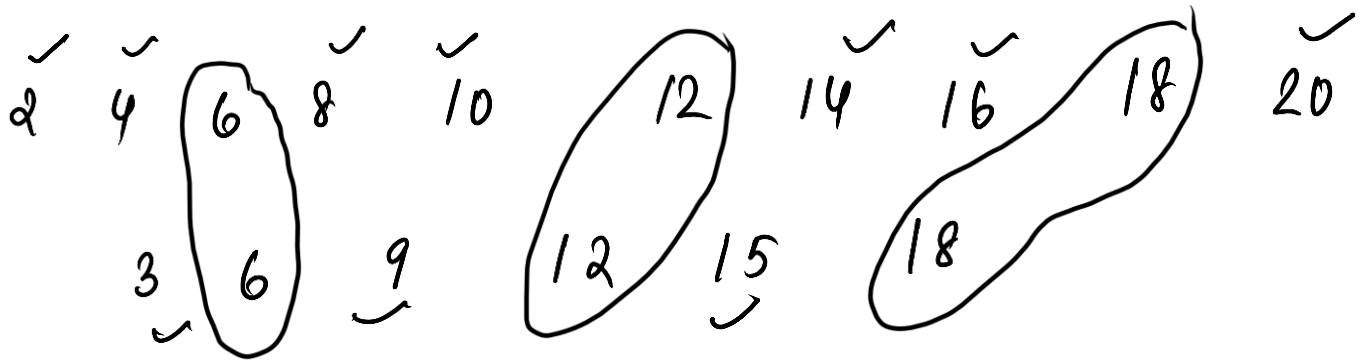
c) $\frac{1}{8}$

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) $\frac{13}{20}$ ✓

$\left(\frac{13}{20}\right)$

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

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) $\frac{7}{20}$

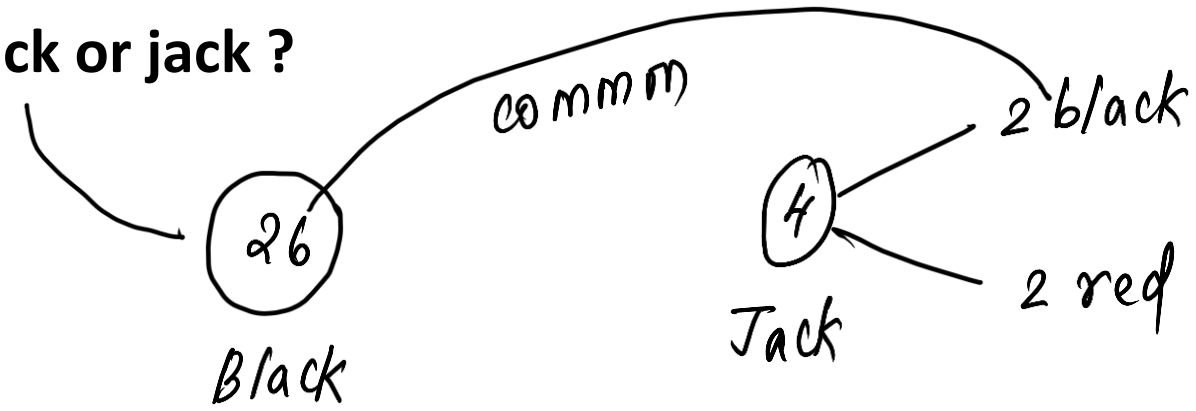
c) $\frac{11}{20}$

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) $\frac{1}{2}$

$$\frac{28}{52} = \frac{7}{13}$$

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

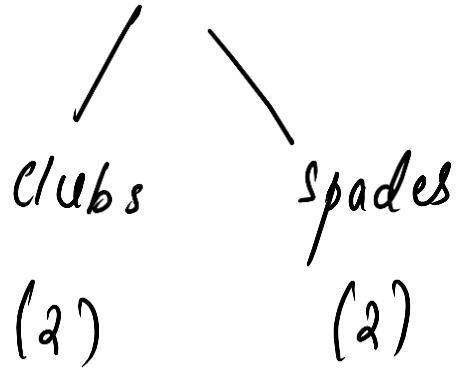
A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is '2' of black suit ?

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

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

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

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



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

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

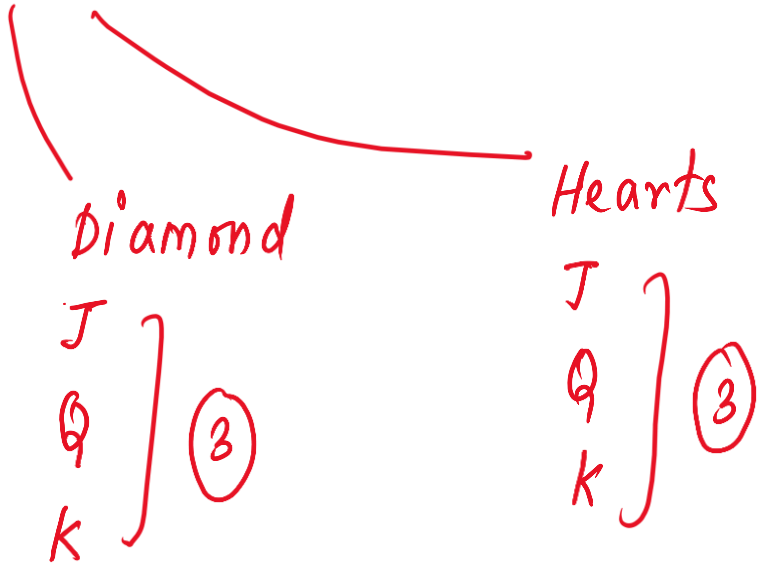
A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is red face card ?

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

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

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

d) $\frac{3}{26}$ ✓



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

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) $\frac{5}{8}$

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

d) $\frac{4}{7}$ ✓

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

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 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

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

$$1 - \frac{12}{600} = \frac{588}{600} = \frac{98}{100} = 0.98$$

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

$\left(\frac{7}{17}\right)$

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

(n) favourable outcomes

$$0.035 = \frac{(n)}{400}$$

$$n = 0.035 \times 400$$

$$= 3.5 \times 4$$

$$= 14$$

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) $-1 \leq P(A) \leq 1$

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) $\frac{5}{7}$

1 year = 52 weeks → 52 sundays

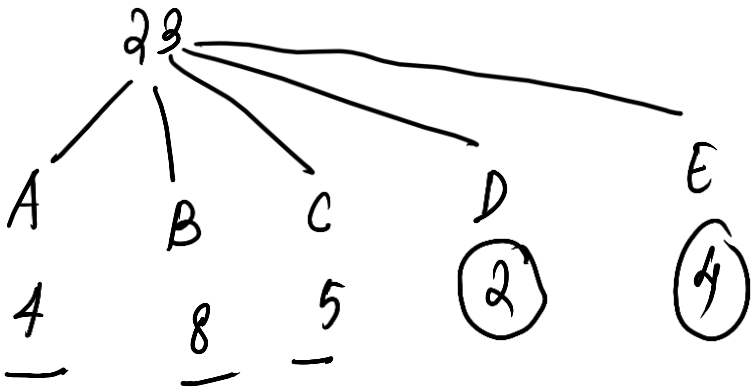
$\frac{365}{7} = 52\frac{1}{7}$ → 1 extra day, → M, T, W, Th, Fri, Sat, Sun

$\frac{1}{7}$

QUESTION

A school has five houses A, B, C, D and E. A class has 23 students, 4 from house A, 8 from house B, 5 from house C, 2 from house D and rest from house E. A single student is selected at random to be the class monitor. The probability that the selected student is not from A, B and C is

(A) $\frac{4}{23}$ (B) $\frac{6}{23}$ (C) $\frac{8}{23}$ (D) $\frac{17}{23}$



$$\frac{2+4}{23} = \frac{6}{23}$$

CDS-AFCAT 1 2025

SSBCrack EXAMS

LIVE

MATHS

NUMBER SYSTEM

CLASS 1

NAVJYOTI SIR