



**Aakash**  
+ BYJU'S

**SOLUTIONS**  
FOR  
**MOCK TEST PAPER**

**Class - X**

**Mathematics**  
(Standard)





Corporate Office : Aakash Tower, 8, Pusa Road, New Delhi-110005,  
Ph.011-47623456

MM : 80

Mock Test Paper (Maths-Standard) - Class-X (2023-24)

Time : 180 Min.

Hints and Solutions

MATHEMATICS

SECTION-A : Multiple Choice Type Questions (20×1 = 20 Marks)

- A1. Answer : (3) ...[1 Mark]  
A2. Answer : (4) ...[1 Mark]  
A3. Answer : (4) ...[1 Mark]  
A4. Answer : (4) ...[1 Mark]  
A5. Answer : (3) ...[1 Mark]  
A6. Answer : (2) ...[1 Mark]  
A7. Answer : (1) ...[1 Mark]  
A8. Answer : (3) ...[1 Mark]  
A9. Answer : (3) ...[1 Mark]  
A10. Answer : (4) ...[1 Mark]  
A11. Answer : (2) ...[1 Mark]

Solution:

$$\begin{aligned} & \frac{\cos^2 60^\circ - 7 \tan^2(45^\circ) + 8 \operatorname{cosec}^2 60^\circ}{\sin^2 45^\circ - 5 \cos^2 90^\circ + 3 \sin(30^\circ)} \\ &= \frac{\frac{1}{4} - 7 + 8 \times \frac{4}{3}}{\frac{1}{2} - 0 + 3 \times \frac{1}{2}} \\ &= \frac{\frac{1}{4} - 7 + 8 \times \frac{4}{3}}{\frac{1}{2} + \frac{3}{2}} \\ &= \frac{\frac{1}{4} - 7 + \frac{32}{3}}{\frac{4}{2}} = \frac{3 - 84 + 128}{12} \times \frac{1}{2} \\ &= \frac{47}{12} \times \frac{1}{2} = \frac{47}{24} \end{aligned}$$

- A12. Answer : (2) ...[1 Mark]  
A13. Answer : (4) ...[1 Mark]  
A14. Answer : (2) ...[1 Mark]  
A15. Answer : (2) ...[1 Mark]  
A16. Answer : (1) ...[1 Mark]  
A17. Answer : (3) ...[1 Mark]  
A18. Answer : (4) ...[1 Mark]  
A19. Answer : (4) ...[1 Mark]  
A20. Answer : (1) ...[1 Mark]

## SECTION-B : Very Short Answer Type Questions (5×2 = 10 Marks)

**A21. Solution:**

$$\text{Discriminant, } D = (1)^2 - 4(1)(1) = -3 < 0$$

No real roots

...[1 Mark]

...[1 Mark]

OR

**Solution:**

$$64 = 2^6 \text{ and } 200 = 2^3 \times 5^2$$

$$\therefore \text{HCF}(64, 200) = 2^3 = 8$$

...[1 Mark]

...[1 Mark]

**A22. Solution:**

We have,

$$2x^2 - x - 15 = 2x^2 - 6x + 5x - 15 \\ = (2x + 5)(x - 3)$$

So, the value of  $2x^2 - x - 15$  is zero when  $2x + 5 = 0$  or  $x - 3 = 0$ .Therefore, the zeroes of  $2x^2 - x - 15$  are  $\frac{-5}{2}$  and 3.

Now,

$$\text{Sum of zeroes} = \frac{-5}{2} + 3 = \frac{1}{2} = \frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$$

...[0.5 Mark]

...[0.5 Mark]

$$\text{Product of zeroes} = \frac{-5}{2} \times 3 = \frac{-15}{2} = \frac{\text{Constant term}}{\text{Coefficient of } x^2}$$

...[0.5 Mark]

...[0.5 Mark]

**A23. Solution:**

$$\text{Here, } (1 + \cot^2\theta)(1 - \cos\theta)(1 + \cos\theta) \\ = (1 + \cot^2\theta)(1 - \cos^2\theta)$$

$$= (1 + \cot^2\theta)\sin^2\theta \\ = \text{cosec}^2\theta \sin^2\theta \\ = 1$$

...[1 Mark]

...[1 Mark]

OR

**Solution:**

$$\text{Given } \tan\theta = \sqrt{3} \\ \Rightarrow \theta = 60^\circ$$

...[1 Mark]

$$\therefore 2\sin^2 60^\circ - 3\cos^2 60^\circ = 2 \times \frac{3}{4} - 3 \times \frac{1}{4} \\ = \frac{6}{4} - \frac{3}{4} \\ = \frac{3}{4}$$

...[1 Mark]

**A24. Solution:**

The integers divisible by 5 between 1 and 80 are 5, 10, 15, 20, 25, 30, ..... 75

Let  $n$  be the number of integers which is a multiple of 5.

$$T_n = a + (n - 1)d \\ 75 = 5 + (n - 1)5 \\ n = 15$$

...[1 Mark]

$$P(\text{Not divisible by 5}) = \frac{63}{78} = \frac{21}{26}$$

...[1 Mark]

**A25. Solution:**

$$\frac{3}{6} = \frac{4}{8} = \frac{12}{24} = \frac{1}{2}, \text{ pair of linear equation represents coincident lines.}$$

...[2 Mark]

## SECTION-C : Short Answer Type Questions (6×3 = 18 Marks)

**A26. Solution:**

Let us assume that  $\sqrt{7}$  is rational. Then, there exists co-prime integers  $a$  and  $b$  such that

$$\sqrt{7} = \frac{a}{b}$$

$$\Rightarrow b\sqrt{7} = a$$

...[1 Mark]

Squaring both sides, we get

$$a^2 = 7b^2$$

Therefore,  $a^2$  is divisible by 7 and hence,  $a$  is also divisible by 7.

...[1 Mark]

So, we can write  $a = 7r$ , for some integer  $r$ .

Substituting for  $a$ , we get  $49r^2 = 7b^2 \Rightarrow 7r^2 = b^2$ .

This means,  $b^2$  is also divisible by 7 and so,  $b$  is also divisible by 7.

So, our assumption is wrong because  $a$  and  $b$  are not co-prime.

...[1 Mark]

Hence,  $\sqrt{7}$  is irrational.

**A27. Solution:**

Let the two digit number be  $10x + y$  ( $y > x$ ).

**According to the question,**

$$10x + y + 10y + x = 110$$

...[0.5 Mark]

$$\Rightarrow 11x + 11y = 110$$

$$\Rightarrow x + y = 10 \dots(i)$$

...[0.5 Mark]

Also,  $y - x = 4 \dots(ii)$

...[0.5 Mark]

On adding equations (i) and (ii), we get

$$2y = 14$$

$$y = 7$$

...[0.5 Mark]

On putting value of 'y' in equation (i), we get

$$x = 3$$

...[0.5 Mark]

Thus, the number is 37.

...[0.5 Mark]

**A28. Solution:**

$\therefore$  Angle swept by minute hand in an hour =  $360^\circ$

$\therefore$  Angle swept by minute hand in a minute =  $\frac{360^\circ}{60} = 6^\circ$

...[1 Mark]

$\therefore$  Angle swept by minute hand in 35 minutes =  $6^\circ \times 35 = 210^\circ$

**According to the question,**

Area swept by the hour in the time period 4:15 am and 4:50 am =  $\frac{\pi r^2}{360^\circ} \times 210^\circ$

...[1 Mark]

$$= \frac{22}{7} \times \frac{(14)^2 \times 210^\circ}{360^\circ}$$

$$= 359\frac{1}{3} \text{ cm}^2$$

...[1 Mark]

OR

**Solution:**

$$PQ = \sqrt{[3 - (-3)]^2 + [-4 - (-4)]^2} = 6 \text{ units}$$

...[0.5 Mark]

$$QR = \sqrt{(3 - 3)^2 + [2 - (-4)]^2} = 6 \text{ units}$$

...[0.5 Mark]

$$RS = \sqrt{(3 - (3))^2 + (2 - 2)^2} = 6 \text{ units}$$

...[0.5 Mark]

$$SP = \sqrt{[-3 - (-3)]^2 + [(2 - (-4))]^2} = 6 \text{ units}$$

...[0.5 Mark]

$$PR = \sqrt{[3 - (-3)]^2 + [2 - (-4)]^2} = 6\sqrt{2} \text{ units}$$

...[0.5 Mark]

As,  $PQ = QR = RS = SP$ , and  $PR^2 = PQ^2 + QR^2$ , So, PQRS is a square

...[0.5 Mark]

**A29. Solution:**

$$\text{Radius of the cylindrical part} = \frac{8}{2} = 4 \text{ m}$$

...[0.5 Mark]

Height of the cylindrical part = 4.2 m

$$\therefore \text{Curved surface area of cylindrical part} = 2\pi rh$$

$$= 2 \times \frac{22}{7} \times 4 \times 4.2$$

$$= 105.6 \text{ m}^2$$

...[1 Mark]

$$\therefore \text{Curved surface area of the conical top} = \pi rl$$

$$= \frac{22}{7} \times 4 \times 5.6 \text{ m}^2$$

$$= 70.4 \text{ m}^2$$

...[0.5 Mark]

$$\Rightarrow \text{Total area of canvas} = 105.6 \text{ m}^2 + 70.4 \text{ m}^2$$

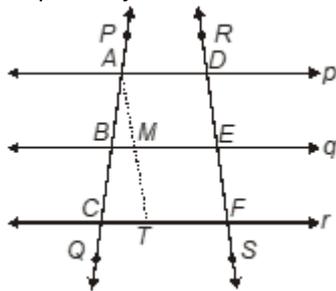
$$= 176 \text{ m}^2$$

...[1 Mark]



**A30. Solution:**

**Given :** Three parallel lines  $p, q$  and  $r$  which are cut by the transversals and at  $A, B, C$  and  $D, E, F$  respectively.



**To Prove :**  $\frac{AB}{BC} = \frac{DE}{EF}$

**Construction :** Draw  $AT \parallel RS$  meeting the lines  $q$  and  $r$  in  $M$  and  $T$  respectively.

...[0.5 Mark]

**Proof :** Since  $AD \parallel ME$  and  $AM \parallel DE$ ,

$\therefore AMED$  is a parallelogram.

$\Rightarrow AM = DE \dots(i)$

...[0.5 Mark]

Also,  $ME \parallel TF$  and  $MT \parallel EF$

$\therefore MTFE$  is a parallelogram.

...[0.5 Mark]

$\Rightarrow MT = EF \dots(ii)$

...[0.5 Mark]

Now, in  $\triangle ACT$ ,  $BM \parallel CT$

$\therefore \frac{AB}{BC} = \frac{AM}{MT}$  [By BPT]

...[0.5 Mark]

$\Rightarrow \frac{AB}{BC} = \frac{DE}{EF}$

[From (i) and (ii)]

...[0.5 Mark]

Hence proved.

OR

**Solution:**

L.H.S. =  $(\tan\theta + 3)(3 \tan\theta + 1)$

$$= \left( \frac{\sin\theta}{\cos\theta} + 3 \right) \left( \frac{3 \sin\theta}{\cos\theta} + 1 \right)$$

...[0.5 Mark]

$$= \left( \frac{\sin\theta + 3 \cos\theta}{\cos\theta} \right) \left( \frac{3 \sin\theta + \cos\theta}{\cos\theta} \right)$$

...[0.5 Mark]

$$= \left( \frac{3 \sin^2\theta + 9 \sin\theta \cos\theta + \sin\theta \cos\theta + 3 \cos^2\theta}{\cos^2\theta} \right)$$

...[1 Mark]

$$= \frac{3 + 10 \sin\theta \cos\theta}{\cos^2\theta}$$

...[0.5 Mark]

$$= 3 \sec^2\theta + 10 \tan\theta = \text{R.H.S.}$$

...[0.5 Mark]

**A31. Solution:**

Total numbers of outcomes = 50

...[1 Mark]

Prime numbers less than 50 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

...[1 Mark]

Number of favourable outcomes = 15

$$\therefore \text{Probability} = \frac{15}{50} = \frac{3}{10}$$

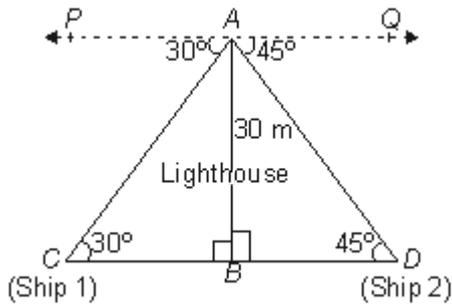
...[1 Mark]

SECTION-D : Long Answer Type Questions (4×5 = 20 Marks)

**A32. Solution:**

In right  $\triangle ABC$ ,  
 $\frac{AB}{BC} = \tan 30^\circ$

...[1 Mark]



$$\frac{30}{BC} = \frac{1}{\sqrt{3}}$$

...[0.5 Mark]

$$BC = 30\sqrt{3} \text{ m}$$

...[1 Mark]

$$BC = 30 \times 1.73$$

$$BC = 51.90 \text{ metres}$$

In right  $\triangle ABD$   
 $\frac{AB}{BD} = \tan 45^\circ$

...[1 Mark]

$$\frac{30}{BD} = 1$$

$$BD = 30 \text{ metres}$$

...[1 Mark]

As  $CB > DB$ , so ship 2 reach the lighthouse first.

...[0.5 Mark]

OR

**Solution:**

Number of Social Science books = 153  
 Number of Science books =  $527 - 153 = 374$

...[1 Mark]

Let us find the HCF (374, 153)  
 $374 = 17 \times 22$   
 $153 = 17 \times 9$

...[1 Mark]

Thus, we have  $\text{HCF}(374, 153) = 17$ .

...[1 Mark]

Now, each bundle has to contain 17 books so that the number of bundles should be least.

$$\text{The number of bundles of Social Science books} = \frac{153}{17} = 9$$

...[1 Mark]

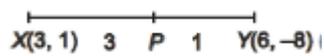
$$\text{The number of bundles of Science books} = \frac{374}{17} = 22$$

...[0.5 Mark]

Total number of bundles made =  $9 + 22 = 31$ .

...[0.5 Mark]

A33. Solution:



We have,

$$\frac{XY}{YP} = \frac{4}{1}$$

$$\Rightarrow \frac{XY}{YP} - 1 = \frac{4}{1} - 1$$

...[0.5 Mark]

$$\Rightarrow \frac{XY-YP}{YP} = \frac{4-1}{1}$$

...[1 Mark]

$$\Rightarrow \frac{XP}{YP} = \frac{3}{1}$$

So P divides XY in the ratio 3 : 1

...[0.5 Mark]

$$\text{Coordinates of P are } \left( \frac{3 \times 1 + 6 \times 3}{3+1}, \frac{1 \times 1 + 3 \times (-8)}{3+1} \right)$$

...[1 Mark]

$$= \left( \frac{21}{4}, \frac{-23}{4} \right)$$

...[0.5 Mark]

Since  $\left( \frac{21}{4}, \frac{-23}{4} \right)$  lies on the line  $2x + y + k = 0$

$$\therefore 2 \times \frac{21}{4} + \frac{-23}{4} = -k$$

...[0.5 Mark]

$$\Rightarrow \frac{42-23}{4} = -k$$

...[0.5 Mark]

$$\Rightarrow k = \frac{-19}{4}$$

...[0.5 Mark]

OR



**Solution:**

Statement : In a triangle, a line drawn parallel to one side of a triangle intersecting the other two sides in distinct points, divides the other two sides in the same ratio.

...[0.5 Mark]

Proof of the Theorem

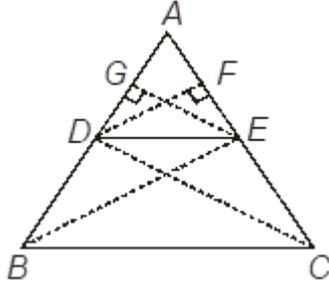
**Given :**  $\triangle ABC$ , in which  $DE$  is drawn parallel to  $BC$ .

**To Prove :**  $\frac{AD}{DB} = \frac{AE}{EC}$

**Construction :** Join  $CD$  and  $BE$ . Draw  $DF \perp AE$  and  $EG \perp AD$ .

...[0.5 Mark]

**Proof :**  $ar(\triangle ADE) = \frac{1}{2} \times AD \times EG \dots(i)$



$ar(\triangle BDE) = \frac{1}{2} \times BD \times EG \dots(ii)$

...[1 Mark]

On dividing (i) by (ii), we get

$$\frac{ar(\triangle ADE)}{ar(\triangle BDE)} = \frac{\frac{1}{2} \times AD \times EG}{\frac{1}{2} \times BD \times EG} = \frac{AD}{BD} \dots(iii)$$

...[1 Mark]

Similarly,

$$ar(\triangle ADE) = \frac{1}{2} \times DF \times AE$$

$$\text{and } ar(\triangle CDE) = \frac{1}{2} \times CE \times DF$$

$$\Rightarrow \frac{ar(\triangle ADE)}{ar(\triangle CDE)} = \frac{\frac{1}{2} \times DF \times AE}{\frac{1}{2} \times DF \times CE} = \frac{AE}{CE} \dots(iv)$$

...[1 Mark]

Now,  $ar(\triangle BDE) = ar(\triangle CDE)$  [ $\because$  Triangles on the same base and between the same parallel lines are equal in area]

...[0.5 Mark]

$$\Rightarrow \frac{ar(\triangle ADE)}{ar(\triangle BDE)} = \frac{ar(\triangle ADE)}{ar(\triangle CDE)}$$

...[0.5 Mark]

$\therefore$  From (iii) and (iv), we get

$$\frac{AD}{DB} = \frac{AE}{EC}$$

Hence proved.

A34. Solution:

Classes	Frequency	Cumulative frequency
0 – 10	5	5
10 – 20	10	15
20 – 30	11	26
30 – 40	$x$	$26 + x$
40 – 50	27	$53 + x$
50 – 60	38	$91 + x$
60 – 70	40	$131 + x$
70 – 80	29	$160 + x$
80 – 90	14	$174 + x$
90 – 100	6	$180 + x$
<b>Total</b>	$180 + x$	

...[2 Marks]

$$\frac{N}{2} = \frac{180+x}{2}$$

Median is 57.5, so median class is 50 – 60,  $l = 50$ ,  $h = 10$ ,  $cf = 53 + x$ ,  $f = 38$

...[1 Mark]

$$\therefore \text{Median} = l + \left( \frac{\frac{N}{2} - cf}{f} \right) \times h$$

...[1 Mark]

$$57.5 = 50 + \left( \frac{\frac{180+x}{2} - (53+x)}{38} \right) \times 10$$

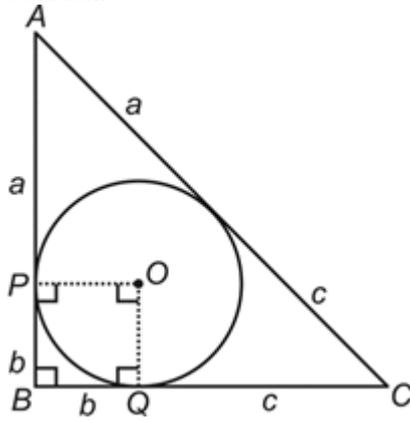
$$\Rightarrow x = 17$$

...[0.5 Mark]

...[0.5 Mark]



A35. Solution:



The triangle  $ABC$  is right-angled at  $B$ .

$\therefore AC = 50$  m,

Length of tangents drawn from an external point are equal.

$\therefore a + b = 40$  ... (i)

$b + c = 30$  ... (ii)

and  $c + a = 50$  ... (iii)

...[1 Mark]

Now adding (i), (ii) and (iii), we get

$$2(a + b + c) = 120$$

$$\Rightarrow a + b + c = 60 \text{ ... (iv)}$$

...[1 Mark]

Now from (iv) and (i), we get

$$c = 20 \text{ m}$$

...[1 Mark]

From (iv) and (ii), we get

$$a = 30 \text{ m}$$

$$\text{and } b = 10 \text{ m}$$

...[1 Mark]

Now as  $\angle B = 90^\circ$ ,  $\angle OPB = 90^\circ$ ,  $\angle OQB = 90^\circ$ ,  $\angle POQ = 90^\circ$ .

$\therefore OPBQ$  is a square.

Hence, radius of the circle =  $b$  i.e., 10 m.

...[1 Mark]

SECTION-E : Source-based / Case-based Units of Assessment (3×4 = 12 Marks)

A36.

(a) Solution:

$$a_{80} = a + 79d = 4 + 79(5)$$

$$= 399$$

...[1 Mark]

(b) Solution:

$$a_1 + a_{80} = 4 + 399 = 403$$

...[1 Mark]

(c) Solution:

Middle most terms are  $a_{40}$  and  $a_{41}$

$$a_{40} = a + 39d = 4 + 39(5) = 199$$

...[1 Mark]

$$a_{41} = a + 40d = 4 + 40(5) = 204$$

...[1 Mark]

or

(c) Solution:

$$S_{80} = \frac{80}{2} [2(4) + (80 - 1)5]$$

...[1 Mark]

$$= 16120$$

...[1 Mark]

A37.

(a) Solution:

Class	Class marks ( $x_i$ )	Frequency( $f_i$ )	Cumulative frequency (cf)	$f_i x_i$
3 – 6	4.5	2	2	9
6 – 9	7.5	5	7	37.5
9 – 12	10.5	10	17	105
12 – 15	13.5	23	40 = N	310.5
		$\sum f_i = 40$		$\sum f_i x_i = 462$

Modal class is the class having highest frequency, i.e. 12 – 15

...[1 Mark]

(b) Solution:

Cumulative frequency = (N) = 40

then,  $\frac{N}{2} = 20$

Median class is 12 – 15

Lower limit of median class is 12

...[1 Mark]

(c) Solution:

$$\begin{aligned} \text{Median} &= l + \left( \frac{\frac{N}{2} - cf}{f} \right) \times h \\ &= 12 + \left( \frac{20 - 17}{23} \right) \times 3 = 12.39 \end{aligned}$$

...[2 Marks]

or

(c) Solution:

$$\begin{aligned} \text{Mean} &= \frac{\sum f_i x_i}{\sum f_i} \\ &= \frac{462}{40} = 11.55 \end{aligned}$$

...[2 Marks]

A38.

(a) Solution:

Let height of pole 'B' be  $h$  meters

...[1 Mark]

In  $\triangle RSP$

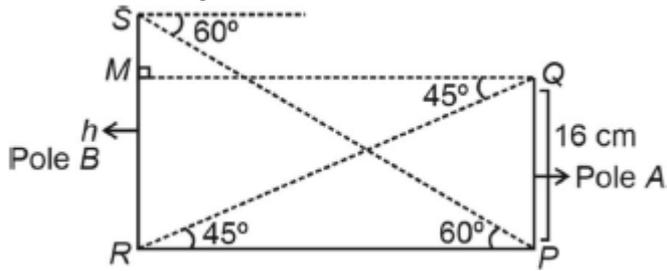
$$= \tan 60^\circ = \frac{h}{16}$$

$$\Rightarrow \sqrt{3} = \frac{h}{16}$$

$$\Rightarrow h = 16\sqrt{3} \text{ m}$$

(b) **Solution:**

As shown in the figure,



In  $\Delta PQR$

$$\tan 45^\circ = \frac{PQ}{PR}$$

$$\Rightarrow 1 = \frac{16}{PR}$$

$$\Rightarrow PR = 16$$

...[1 Mark]

(c) **Solution:**

PS is the distance between top of pole B and foot of pole A.

In  $\Delta PRS$

$$\sin 60^\circ = \frac{RS}{PS} = \frac{16\sqrt{3}}{PS}$$

$$\Rightarrow \frac{\sqrt{3}}{2} = \frac{16\sqrt{3}}{PS}$$

$$\Rightarrow PS = 32 \text{ m}$$

...[1 Mark]

...[1 Mark]

or

(c) **Solution:**

QR is the distance between top of pole A and foot of pole B

In  $\Delta PRQ$

$$\sin 45^\circ = \frac{16}{QR}$$

$$\Rightarrow \frac{1}{\sqrt{2}} = \frac{16}{QR}$$

$$\Rightarrow QR = 16\sqrt{2} \text{ m}$$

...[1 Mark]

...[1 Mark]





# Aakashians Create History in International Olympiads (Classroom Students)

## IBO 2023



Gold Medalists

### 34<sup>th</sup> International Biology Olympiad



Dhruv Advani



Rohit Panda



Chirag Falor



International Olympiad on  
Astronomy & Astrophysics



Dhiren Bhardwaj



32<sup>nd</sup> International  
Biology Olympiad



Anshul



32<sup>nd</sup> International  
Biology Olympiad



Amritansh Nigam



33<sup>rd</sup> International  
Biology Olympiad



Prachi Jindal



33<sup>rd</sup> International  
Biology Olympiad



Tanishka Kabra



54<sup>th</sup> International  
Chemistry Olympiad

## Excellent Performance by Aakashians in NSEs, IOQM, NSO-II, IMO-II & INOs

**201** Classroom Students  
Aakashians Qualified  
in NSEs  
2022-23

**63** Classroom Students  
Aakashians Qualified  
in IOQM  
2023

**783** 774 Classroom +  
09 Digital & Distance  
Aakashians Qualified  
in NSO (Level-II)  
2023

**601** 590 Classroom +  
11 Distance & Digital  
Aakashians Qualified  
in IMO (Level-II)  
2023

**39** Classroom Students  
Aakashians Qualified  
for OCSCs/IMOTC  
/APMO 2023

NSEs - National Standard Examinations | IOQM - Indian Olympiad Qualifier in Mathematics | NSO - National Science Olympiad  
IMO - International Mathematics Olympiad | INOs - Indian National Olympiads | OCSCs - Orientation cum Selection Camps,  
IMOTC - International Mathematical Olympiad Training Camp, APMO - Asian Pacific Mathematics Olympiad

**107009** Aakashians Qualified in  
NEET (UG) 2023  
(94893 Classroom + 12116 Distance & Digital)

### Our Top Performers

**AIR 3** **716/720**  
Kaustav Bauri  
2 Year Classroom

**AIR 5** **715/720**  
Dhruv Advani  
3 Year Classroom  
KARNATAKA TOPPER

**AIR 6** **715/720**  
Surya Siddharth N  
4 Year Classroom

**AIR 8** **715/720**  
Swayam Shakti T  
3 Year Classroom  
ODISHA TOPPER

**2340** Aakashians Qualified in  
JEE (Advanced) 2023  
(2160 Classroom + 180 Distance & Digital)

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Aditya Neeraje  
2 Year Classroom

**AIR 28**  
Aakash Gupta  
1 Year Classroom

**AIR 29**  
Tanishq Mandhane  
4 Year Classroom

**AIR 31**  
Kamyak Channa  
4 Year Classroom

**AIR 36**  
Dhruv Sanjay Jain  
4 Year Classroom

**AIR 42**  
Shivanshu Kumar  
4 Year Classroom

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