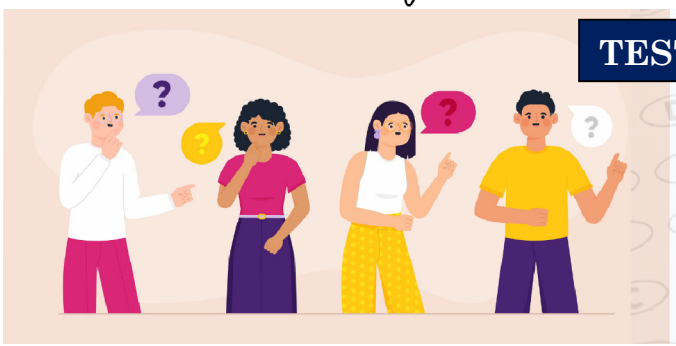
For Video Solutions CLICK HERE



TEST-09

MULTIPLE CHOICE TYPE QUESTIONS

For 2025 Exams - Mathematics (041) - Class 11

☑ ***Select the correct option in the followings. Each question carries 1 mark.***

01. The angle between the x-axis and the line joining the points $(3, -1)$ and $(4, -2)$ is

(a) 135° (b) 45° (c) 1 (d) -1

02. Angle made by the line $\sqrt{3}x + y - 1 = 0$ with x-axis, is

(a) $\frac{\pi}{3}$ (b) $\frac{5\pi}{6}$ (c) $\frac{2\pi}{3}$ (d) $\frac{\pi}{6}$

03. Three lines are said to be concurrent if they passes through

(a) origin (0, 0) (b) any point on the x-axis

(c) any point on the y-axis (d) a common point

04. The slope of a line, whose inclination with the x-axis is 120°, is

(a) $\sqrt{3}$ (b) $-\sqrt{3}$ (c) $-\frac{1}{\sqrt{3}}$ (d) $\frac{1}{\sqrt{3}}$

05. Let A(2, 1), B(0, –1), C(–1, 8) and D(4, 3). Then (Slope of AB) × (Slope of CD) =

(a) 0 (b) 1 (c) -1 (d) None of these

06. Slope of a line parallel to y-axis is

(a) any real number (b) any positive real number

(c) any negative real number (d) not defined

07. If $\frac{4}{9}$ is the slope of a line l_1, then the slope of line l_2 is

(a) $\frac{4}{9}$, if l_1 is perpendicular to l_2 (b) $\frac{4}{9}$, if l_1 is parallel to l_2

(c) $-\frac{9}{4}$, if l_1 is parallel to l_2 (d) $-\frac{4}{9}$, if l_1 is perpendicular to l_2

08. Let X(a, –1), Y(2, 1) and Z(4, 5). For what value of a, the points X, Y and Z are collinear?

(a) 1 (b) -1 (c) 0 (d) 2

09. Which of the following represents slope-intercept form of equation of line?

mathematicia (+919650350480)

(a) $\frac{x}{a}+\frac{y}{b}=1$ (b) $x-x_1=m(y-y_1)$

(c) $y-y_1=m(x-x_1)$ (d) $y=mx+c$

10. Slope of line $2x+3y-9=0$ is

(a) $\frac{2}{3}$ (b) $-\frac{3}{2}$ (c) $-\frac{2}{3}$ (d) $\frac{3}{2}$

11. The x-intercept made by the line $4x+7y-28=0$ is

(a) 7 (b) 4 (c) –7 (d) –4

12. Let a and b respectively denote the x and y intercepts made by the line $3x+7y-21=0$. Then

(a) $a-b=10$ (b) $a+b=10$ (c) $a\times b=10$ (d) $a-b=-4$

13. The equation of a line passing through the point (2, 5) and parallel to x-axis, is

(a) $x=5$ (b) $x=2$ (c) $y=5$ (d) $y=2$

14. The equation of a line passing through the point (–2, 5) and parallel to y-axis, is

(a) $x=5$ (b) $x=-2$ (c) $y=-2$ (d) $y=5$

15. If a line passes through the points (–1, –4) and (0, 3), then its equation is given by

(a) $7x+y+3=0$ (b) $7x+y-3=0$ (c) $x-7y+3=0$ (d) $7x-y+3=0$

16. Equation of a line passing through the point (–3, 5) and perpendicular to the line passing through the points (–3, 6) and (2, 5)

(a) is $y=5x+20$ (b) is $5y=x+20$ (c) is $y=x+20$ (d) is $y=5x-20$

17. A line l passes through the point (3, 4) and cuts off intercepts on the axes which are equal in magnitude but opposite in sign. Then the equation of line l is

(a) $x=y+1$ (b) $y=x+1$ (c) $y=x-1$ (d) $x-y=0$

18. Equation of perpendicular bisector of the line-segment joining the points (–4, 1) and (0, 3), is

(a) $2x+y+2=0$ (b) $x+2y+2=0$ (c) $2x+y-2=0$ (d) $2x-y+2=0$

19. The inclination of the line $\sqrt{3}x+3y=71$ with x-axis is

(a) 120° (b) 30° (c) 60° (d) 150°

20. Distance of the point (–1, 3) from the line $3x+4y=1$

(a) is $\frac{5}{8}$ units (b) is $\frac{8}{5}$ units (c) is $\frac{1}{5}$ units (d) is $\frac{1}{8}$ units

21. If the line $(k-3)x-(4-k^2)y+(k^2-7k+6)=0$ is parallel to x-axis, then

(a) $k = 3$ (b) $k = -3$ (c) $k = \pm 3$ (d) $k = 0$

22. Let a line L passes through the mid-point of the line segment joining the points A(2, –1) and B(1, 3). If the line L is parallel to the line $3x - y = 1$, then its equation is given by

(a) $6x + 2y - 9 = 0$ (b) $6x + 2y - 7 = 0$ (c) $6x - 2y - 7 = 0$ (d) $6x + 7y - 2 = 0$

23. If the image of a point (3, 8) in the line mirror $px + 3y = 7$ is the point (–1, –4), then $p =$

(a) –1 (b) 1 (c) 0 (d) 2

24. The equation of the base of an equilateral triangle is $x + y = 2$ and the vertex is (2,–1). Then the length of the sides of the triangle is

(a) $\sqrt{\frac{2}{3}}$ units (b) $\sqrt{\frac{3}{2}}$ units (c) $\frac{1}{\sqrt{3}}$ units (d) $\frac{1}{\sqrt{2}}$ units

25. A ray of light passing through the point (1, 2) reflects on the x-axis at point A and the reflected ray passes through the point (5, 3). Then the coordinates of A will be

(a) $\left(0, \frac{13}{5}\right)$ (b) $\left(\frac{13}{5}, 0\right)$ (c) $\left(\frac{3}{5}, 0\right)$ (d) $\left(\frac{5}{13}, 0\right)$

*Question numbers **26** and **30** are Assertion and Reason based questions. Two statements are given, one labelled **Assertion (A)** and the other labelled **Reason (R)**. Select the correct answer from the codes (a), (b), (c) and (d) as given below.*

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is **not** the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

26. **Assertion (A) :** If the lines $Px + 6y = 27$ and $2x + 3y = 25$ are parallel, then $P + 4 = 0$.

Reason (R) : If l_1 and l_2 are parallel lines, then their slopes will be equal.

27. **Assertion (A) :** The distance between the parallel lines $x + 3y + 1 = 0$ and $x + 3y - 9 = 0$ is given as $\sqrt{10}$ units.

Reason (R) : Distance of a point (x_1, y_1) from the line $Ax + By + C = 0$ is $\frac{|Ax_1 + By_1 + C|}{\sqrt{A^2 + B^2 + C^2}}$.

28. **Assertion (A) :** The equations of the lines passing through the point (3, 2) which make an angle of 45° with the line $2x - y = 3$ are $3x + y - 11 = 0$ and $x - 3y + 3 = 0$.

Reason (R) : The equation of the lines passing through the point (x_1, y_1) and making an angle θ with the line $y = mx + c$ is $\frac{y - y_1}{x - x_1} = \frac{m \pm \tan\theta}{1 \mp m\tan\theta}$.

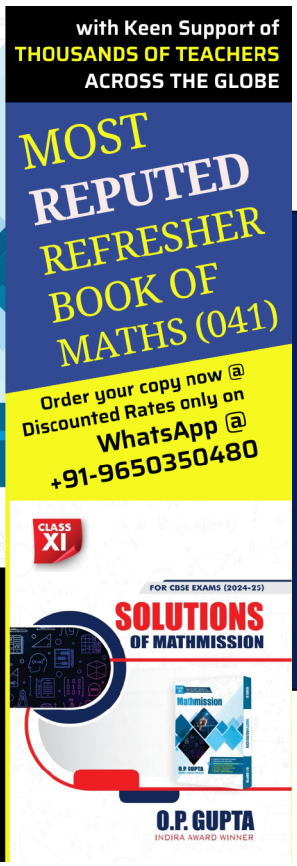
29. **Assertion (A) :** The slope of any line perpendicular to x-axis is always 0.

Reason (R) : Acute angle θ between two lines l_1 and l_2 whose respective slopes are m_1 and m_2, is given by $\tan\theta = \left|\frac{m_2 - m_1}{1 + m_1 . m_2}\right|$.

30. **Assertion (A) :** If three points (h, 0), (a, b) and (0, k) lie on a line, then $\frac{a}{h}+\frac{b}{k}=1$.

Reason (R) : The line $\sqrt{3}x-y+8=0$ makes an angle of 60° with positive direction of x-axis.

If you need **MS Word files** of our Mathematics Tests series of classes XII & XI (**MCQ Type & Subjective Type Questions with Case Study**), then you may grab it as a **Premium Service** (requires Payment).
Please contact on the WhatsApp @ +919650350480 to inquire about the Charges for the same.



We have released Set of **2 Books** for CBSE Class XI (Academic session 2024-25).

1. MATHMISSION FOR XI
- ☑ COMPLETE THEORY & EXAMPLES
- ☑ SUBJECTIVE TYPE QUESTIONS
- ☑ COMPETENCY FOCUSED QUESTIONS
  - ✪ Multiple Choice Questions
  - ✪ Assertion-Reason Questions
  - ✪ Case-Study Questions
  - ✪ Passage-Based Questions
- ☑ ANSWERS OF ALL QUESTIONS

2. SOLUTIONS OF MATHMISSION
- ☑ Step-by-step Detailed Solutions (For all Exercises of MATHMISSION)

This document contains MCQs for Mathematics (041) of class XI.
✪ Answers / Solutions is available on YouTube channel – Mathematicia By O.P. Gupta
You can share this document with other students!

With a lot of Blessings!

O.P. GUPTA
Author & Math Mentor
Indira Award Winner
The O.P. Gupta Advanced Math Classes
@ **Think Academy**, Near Dhansa Bus Stand
Metro Station Gate No.3, Najafgarh, Delhi
Telegram / WhatsApp : +919650350480
YouTube.com/@theopgupta

Exclusive coaching for Maths (041)
By O.P. GUPTA
- ☑ **CBSE XII**
- ☑ **CBSE XI**
- ☑ **CUET**
- ☑ **JEE - MAIN**
- ☑ **NDA**

theopgupta.com

MATHEMATICIA BY O.P. GUPTA

...a name you can bank upon!

Feel Safe to **Share this Document** with other math scholars

CLICK NOW TO Download

or, just type - theopgupta.com

FREE PDF TESTS AND ASSIGNMENTS OF THE CLASSES XII, XI & X

To get FREE PDF Materials, join WhatsApp Teachers Group by Clicking on the Logo

Click on the Book cover to buy!

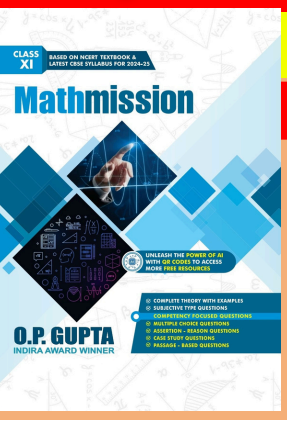
If you are a Student, then you may join our Students Group

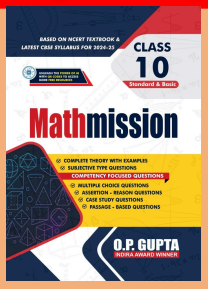
CLICK HERE FOR CLASSES IX & X

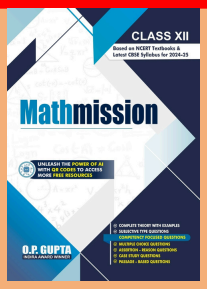
CLICK HERE FOR CLASSES XI & XII

You can add our WhatsApp no. +919650350480 to your Groups also

Many Direct Questions from our Books have been asked in the recent CBSE Exams







MATHMISSION FOR XII, XI & X

2024-25 Edition

/theopgupta /theopgupta /theopgupta /@theopgupta

Buy our books on amazon Flipkart

For Bulk Orders of our Books at Discounted Price, contact on +91-9650350480