## **English**

#### Portfolio

#### **Project works**

#### 1. Book Review Project

Choose any novel/short story from the library or NCERT recommended list.

Write:

Title, Author, Theme, Characters

Summary in own words

Personal opinion/reflection

Add illustrations or creative cover design.

### 2. Biography / Personality Study

Choose a famous personality (freedom fighter, scientist, author, sports person).

Include:

Life sketch

Major achievements

Inspiring qualities

Students can make a timeline chart.

3 Travel Brochure (Art Integrated Project)

Select any Indian state/UT.

Write about:

**Tourist places** 

Food, culture, language, festivals

Special attractions

Add pictures, drawings, or QR codes.

#### 4. Poster Making + Slogan Writing

Themes: Environment, Literacy, Cleanliness, Gender Equality, Unity in Diversity.

Students prepare a poster with catchy slogans and a short write-up.

#### 5. Short Film / Skit Script

Write a short script on a social theme (e.g., "Say No to Bullying" / "Save Water").

Students can perform or submit a written script with dialogues.

#### Project File Format (General)

- 1. Cover Page Title, Student's Name, Class, Roll No, School, Session
- 2. Acknowledgement

- 3. Certificate (teacher's signature)
- 4. Introduction (what the project is about)
- 5. Main Content (as per chosen topic)
- 6. Pictures / Charts / Creative Work
- 7. Conclusion / Learning Outcome
- 8. Bibliography (books, websites, references used)

## <u>HINDI</u>

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# **SCIENCE**

Read chapter Gravitation
5 numericals from Motion, force and laws of motion
Make practical file (according to splitup)
Herberium
RSBVP PROJECT
Project file on tissues and mind maps of all chapters

## <u>SST</u>

- 1. Explain the connection between climate change and poverty with reference to India.
- 2. How does poverty affect children in India? Discuss with examples.
- 3. Explain how poverty is both a cause and a consequence of environmental degradation.

<sup>\*</sup>Write in the A4 sheet and make a project file including all the above projects and submit.

- 4. Compare and contrast the economic and social dimensions of poverty.
- 5. How does the NREGA help in reducing poverty in India? Evaluate its success.
- 6. What is the full form of BPL?
- 7. Which organization in India measures poverty?
- 8. Define climate.
- 9. What is the main factor affecting the climate of a region?
- 10. Name two types of poverty as classified by sociologists.
- 11. Which state in India has the highest poverty ratio?
- 12. Explain the concept of 'vulnerable groups' in the context of poverty.
- 13. How does access to education affect poverty levels?
- 14. What role does the PDS (Public Distribution System) play in alleviating poverty?
- 15. Discuss the interrelationship between climate change and migration.
- 16. How is urban poverty different from rural poverty?
- 17. How does malnutrition relate to poverty in India?
- 18. What are the major sources of income for the poor in India?
- 19. Mention any three challenges faced in the implementation of anti-poverty programs
- 20. Explain the relationship between climate change and natural disasters.

### ARTIFICIAL INTELLIGENCE

Complete below chapter in notes using SSM Material

Al Reflection and Ethics

**Data Literacy** 

Math for Al

ICT

Entrepreneur

### **MATHEMATICS**

- 1. Express 0.36 (repeating) in the form p/q.
- 2. Find the decimal expansion of 1/8.
- 3. Is  $\sqrt{3}$  a rational number? Justify.
- 4. Write the coordinates of a point on the x-axis.
- 5. Write the coordinates of a point on the y-axis.
- 6. What is the degree of the polynomial  $7x^3 + 4x^2 3$ ?
- 7. Find the value of  $p(x) = 2x^2 3x + 4$  at x = 2.
- 8. What is the remainder when  $x^3 + 2x^2 + 3$  is divided by x 1?
- 9. Write the Euclid's axiom which states that "Things equal to the same thing are equal to one another."
- 10. Write the Euclid's postulate about drawing a straight line from one point to another.
- 11. In the given figure, if two lines intersect at a point, what is the sum of vertically opposite angles?
- 12. If two parallel lines are cut by a transversal, what is the relationship between alternate interior

- angles?
- 13. Write the mid-point formula of a line segment joining (x1, y1) and (x2, y2).
- 14. Write the coordinates of the origin.
- 15. State Pythagoras theorem.
- 16. Write the formula to find the distance between two points in coordinate geometry.
- 17. Define collinear points.
- 18. Write the coordinates of a point which is equidistant from axes.
- 19. Write the factorised form of  $x^2 25$ .
- 20. Find the value of  $1/\sqrt{7}$  correct up to 2 decimal places.
- 21. Write the coordinates of the point which divides the line segment joining (2, 3) and (4, 7) in ratio 1:1.
- 22. Write the coordinates of point A (2,0) and B(0,3). What is the line AB intersecting?
- 23. Write one Euclid's postulate related to circles.
- 24. If an angle of a triangle is equal to the sum of other two angles, name the type of triangle
- 25. What is the condition for a polynomial to be linear?
- 26. Write the value of (x+1)(x-1).
- 27. What is the sum of the angles of a triangle?
- 28. If a triangle has two equal sides, what is it called?
- 29. If  $p(x) = x^2 5x + 6$ , find p(1).
- 30. The decimal expansion of a rational number is always either \_\_\_\_ or \_\_\_ (Fill in the blank).
- 1. Express 0.777... in the form p/q.
- 2. Find the decimal expansion of 1/11.
- 3. Find the value of  $\sqrt{(81 + 48\sqrt{3})}$ .
- 4. Show that  $\sqrt{5}$  is irrational.
- 5. Write the coordinates of the vertices of a square of side 2 units placed on axes.
- 6. Plot the points A(2, 3), B(-2, 3), C(-2, -3), D(2, -3). Name the quadrilateral formed.
- 7. Divide  $x^3 + 3x^2 4x + 5$  by x 2.
- 8. Find the remainder when  $x^4 + 3x^3 x + 7$  is divided by x + 1.
- 9. Factorise  $2x^2 + 5x + 3$ .
- 10. Write all five Euclid's postulates.
- 11. Show that the sum of angles on a straight line is 180°.
- 12. Two parallel lines are cut by a transversal. If one angle is 75°, find all the remaining angles.
- 13. Find the distance between the points (3, -2) and (-1, -5).
- 14. Find the midpoint of the line joining (-2, 3) and (4, -1).
- 15. The points A, B, C are collinear. Show it using distance formula, where A(1,2), B(3,8), C(5,14).
- 16. Verify whether (3, -1) is a solution of 2x y = 7.
- 17. Write the coordinates of the centroid of a triangle with vertices (0,0), (6,0), (0,6).
- 18. Find the value of k if (2, k) lies on the line 2x + 3y = 6.
- 19. In nABC,  $\angle A = 50^{\circ}$ ,  $\angle B = 60^{\circ}$ , find  $\angle C$ .
- 20. Prove that an exterior angle of a triangle is equal to the sum of the interior opposite angles.
- 21. Find the coordinates of the point which divides the line segment joining A(1,2) and B(3,8) in the ratio 2:1.
- 22. Factorise  $x^2 + 6x + 8$ .
- 23. Find the distance of the point (0, 4) from the origin.
- 24. The diagonals of a rhombus intersect at right angles. Verify using coordinate geometry, if vertices are (1, 2), (3, 4), (5, 2), (3, 0).
- 25. In nABC, AB = AC and  $\angle$ B = 50°. Find  $\angle$ A and  $\angle$ C.
- 26. Solve graphically: x + y = 5 and x y = 1.
- 27. Write the condition of collinearity of three points in coordinate geometry.
- 28. Write one axiom which cannot be proved using Euclid's geometry.
- 29. Write the coordinates of the centroid of the triangle with vertices (1, 1), (3, 5), (5, 7).
- 30. If the point (k, -1) lies on the line 2x 3y = 5, find k.
- 1. Simplify:  $1/(\sqrt{5}-2) + 1/(\sqrt{5}+2)$ .
- 2. Show that  $3\sqrt{2} + 2\sqrt{3}$  is irrational.
- 3. Divide x^3 2x^2 x 2 by x 2.
- 4. If a polynomial p(x) is divided by (x-2), remainder is -1. Find p(2).
- 5. Factorise  $2x^3 + 3x^2 2x 3$ .
- 6. Verify if points A(1,2), B(3,6), C(5,10) are collinear.
- 7. Find the coordinates of the point which divides the line joining A(2,3) and B(4,7) in the ratio 3:1.
- 8. Show that the diagonals of a rectangle are equal and bisect each other using coordinate geometry.
- 9. Find the distance between (2, -3) and (-4, 1).

- 10. In nABC, AB = AC. Prove that  $\angle$ B =  $\angle$ C.
- 11. In nPQR,  $\angle Q = \angle R$ . Show that PQ = PR.
- 12. In figure, lines AB and CD intersect at O. If  $\angle AOC = 40^{\circ}$  and  $\angle BOC = 60^{\circ}$ , find  $\angle AOD$  and  $\angle BOD$
- 13. The following quadrilateral has vertices A(1,2), B(3,6), C(5,4), D(3,0). Find the type of quadrilateral.
- 14. Construct a right triangle with base 6 cm and hypotenuse 10 cm. Verify using Pythagoras theorem.
- 15. Solve for x: (x + 2)(x 3) = 0.
- 16. If  $p(x) = x^3 4x + 1$ , find p(-1).
- 17. In nABC, prove that the sum of the three angles is 180°.
- 18. If two sides of a triangle are equal, prove that the angles opposite to equal sides are equal.
- 19. Show that the diagonals of a square are equal and bisect each other at right angles.
- 20. Draw the graph of y = 2x + 1 and y = -x + 2. Find their point of intersection.
- 1. Express 0.00137 in the form p/q.
- 2. Show that  $\sqrt{2} + \sqrt{5}$  is irrational.
- 3. Using long division, find the decimal expansion of 17/19.
- 4. Divide  $x^3 3x^2 + 4x 2$  by x 1.
- 5. If  $p(x) = x^3 6x^2 + 11x 6$ , find all zeros of p(x).
- 6. Find the distance between A(2, -3) and B(-4, 1). Verify using distance formula.
- 7. Find the centroid of a triangle with vertices A(1,1), B(2,3), C(3,5).
- 8. Prove that vertically opposite angles are equal when two lines intersect.
- 9. In nXYZ, XY = XZ. Show that  $\angle$ Y =  $\angle$ Z and median from X is perpendicular to YZ.
- 10. Prove that in a right-angled triangle, square of hypotenuse = sum of squares of other two sides.
- 1. Show that  $\sqrt{7}$  is irrational.
- 2. If  $p(x) = x^3 3x^2 + x + 1$ , find all zeros of p(x). Verify relationship between zeros and coefficients.
- 3. Draw the graph of 2x + y = 6 and x y = 2. Shade the area bounded by the lines and coordinate axes.
- 4. Find the centroid of the triangle with vertices (2, 3), (4, -1), (-2, -3). Verify it divides medians in 2:1
- 5. In nABC, D and E are points on AB and AC such that DE || BC. Prove that AD/AB = AE/AC.
- 6. The diagonals of a parallelogram bisect each other. Prove using coordinate geometry.
- 7. Prove that if a transversal intersects two parallel lines, then alternate interior angles are equal.
- 8. Construct a triangle with sides 5 cm, 6 cm, and 7 cm. Draw its incircle.
- 9. In nPQR, prove Pythagoras theorem using similarity.
- 10. The following quadrilateral has vertices A(1,1), B(7,3), C(5,8), D(-2,6). Show that it is a parallelogram.