Vaish Model Sr. Sec. School, Bhiwani
Summer Vacation Home Assignment
Session 2019-20
Class : IX

Parents are requested to take care of their ward/s that they learn and revise the syllabus meant for Periodic Tests, July-2019 which has been given to the student in the school diary.

English:

1. Make a Project File on the topics no. 2, 3, 4 and 5 given on Page No.-79 in Sample Paper (Vol-1)
2. Do diagnostic Tests of the following Chapters of BEEHIVE in your Sample Paper (Vol-2)
   (a) The Fun They Had
   (b) The Sound of Music
   (c) The Road Not Taken (Poem)
   (d) Wind (Poem)
   Learn and Revise the following: -
   Literature Reader : -
   Beehive: - The Fun They Had
   The Sound of Music
   Poetry: - The Road Not Taken
   Wind
   Moments: - The Lost Child
   The Adventures of Toto
   Iswaran the Storyteller
   In the Kingdom of Fools
   Do the practice of the following writing skills and grammar topics in Sample Paper.
   Writing skills : Diary writing
   Article writing
   Grammar : - Determiners, Tenses, Prepositions and Voices
   Note: - The project file must include the following pages: -
   (a) Introduction
   (b) Certification
   (c) Acknowledgement
   (d) Content : Types, Uses, Effects Examples, Solutions, Data, Suggestions supporting it with appropriate pictures wherever possible.
   (e) Bibliography

Hindi :

- पाठ्य पुस्तक क्षितिज भाग – 1 :
  गद्यखण्ड : पाठ–(1) दो बैलों की कथा (प्रेमचंद),
  पाठ–(2) ल्हासा की ओर (राहुल सांकृत्यायन)

काव्यखण्ड : पाठ–(9) : साखियाँ एवं सबद–(1) (कबीर)
पाठ–(10) : वाख (ललद्यद)
कृतिका – पाठ–(2) : मेरे संग की औरतें (मृदुला गर्ग)
उपर्युक्त पाठों के अभ्यास एवं प्रश्नोत्तर याद कीजिए।
हिन्दी व्याकरण की पाठ्य–पुस्तक से उपसर्ग, प्रत्यय एवं समास के अभ्यास प्रश्नों को पूरा कीजिए।
सम्पादक के नाम पत्र सं. 27 से 33 पृष्ठ सं. 338 सातों (7) पत्र लिखिए और याद कीजिए।
विचारात्मक निबंध सं.–41 से 51 पृष्ठ सं. 290 पढ़िए व कोई पाँच निबंध लिखिए।
अर्थ के आधार पर वाक्य–भेद विषय पर एक परियोजना कार्य तैयार कीजिए।

Mathematics

General Guidelines for students: -

1) Prepare a colourful chart on flash card or any mathematical topic of your choice.
2) Revise Chapter : 1, 2, 3, 5, 6, 12 from N.C.E.R.T Book.
3) Do the homework in the separate Homework notebook.
4) Prepare a Project Report on the topic as mentioned against your Roll Number.

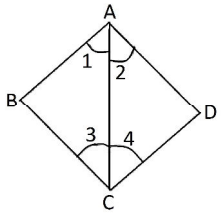
Topic	Roll No.
(a) Students has to prepare a project on history of mathematician.	1, 6, 11, 16, 21, 26, 31, 36, 41, 46
(b) Use of Geometry in daily life	2, 7, 12, 17, 22, 27, 32, 37, 42, 47
(c) Prepare a project report on B.M.I of 10 persons.	3, 8, 13, 18, 23, 28, 33, 38, 43, 48
(d) Use of geometry in daily life.	4, 9, 14, 19, 24, 29, 34, 39, 44, 49
(e) Measure the dimensions of walls, windows and doors of your house and compare their areas.	5, 10, 15, 20, 25, 30, 35, 40, 45, 50

The sequence of pages of a project
(i) Introduction Page
(ii) Certificate
(iii) Verification
(iv) Acknowledgement
(v) Objective
(vi) material Required
(vii) Procedure
(viii) Observations and calculations
(ix) Result
(x) Bibliography

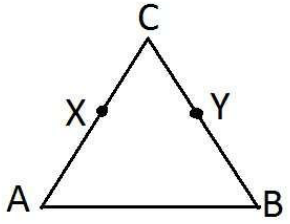
Worksheet

1. Write the following in ascending order: -
   $\sqrt{3}, \sqrt[3]{5}, \sqrt[4]{8}$
2. Find the value of a and b if
   $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a - b\sqrt{6}$
3. If $x = 2 - \sqrt{3}$, find the value of $\left(x - \frac{1}{x}\right)^3$
4. Insert two irrational number between $\sqrt{3}$ and $\sqrt{7}$.

5. Locate $\sqrt{13}$ on the number line.
6. Express $0.6 + 0.\bar{7} + 0.4\bar{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.
7. If $x = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ and $y = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ then find the value of $x^2 + y^2$.
8. If the polynomials $ax^3 + 3x^2 - 13$ and $5x^3 - 8x + a$ leave the same remainder when divided by $x + 1$, then find the value of a.
9. Without actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is divisible by $x^2 - 3x + 2$.
10. Factorise : $7\sqrt{2}x^2 - 10x + 4\sqrt{2}$
11. Factorise : $2x^3 - x^2 - 13x - 6$
12. Using proper identity : $a^3 - 2\sqrt{2}b^3$
13. If $a - b = 7$ and $a^2 + b^2 = 85$, then find the value of $a^3 - b^3$
14. Using identity, factorise : $a^2 - 1 - 2b - b^2$
15. Plot the point P(1,0), Q(4, 0) and S(1,3). Find the co-0rdinates of point R such that PQRS is a square.
16. Find the area of triangle formed by points A(2, 0), B(6, 0) and C(4, 6).
17. Write the coordinates of the points which lie on the x-axis and are at a distance of 3 units from y-axis.
18. On plotting the points O(0, 0), A(3, 0), B(3, 4) and C(0, 4) and joining OA, AB, BC and CO, which figure is obtained.
19. If the coordinates of the points are P(-2, 3) and Q(-3, 5) then (abscissa of P) –(ordinate of Q) is _____.
20. Three vertices of a parallelogram are A (-2, 2), B(6, 2) and C(4, -3). Plot these points on a graph paper and hence use it to find the co-ordinates of the fourth vertex D. Also write the coordinates of the mid-point of CD. What is the area of the parallelogram?
21. If P,Q and R are three points on a line and Q is between P and R, then prove that PR-QR=PQ.
22. Solve the equation $x - 15 = 5$ and state the axiom that you use here.
23. It is known that if $x + y = 10$, then $x + y + z = 10 + z$. Which axiom of Euclid does this statement illustrate?
24. If a point O lies between two points P and Q such that PO=OR then prove that PO=½PR.
25. In figure if $\angle 1 = \angle 4$ and $\angle 4 = \angle 3$, Show that $\angle 1 = \angle 3$.

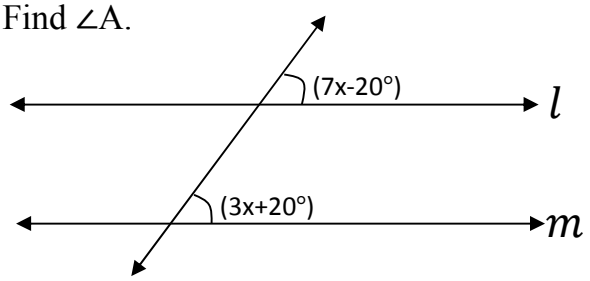


26. In figure, X and Y are the mid points of AC and BC and AX=CY. Show that AC=BC.



27. In ΔABC, ∠A+∠B=110, ∠C + ∠A = 135°. Find ∠A.

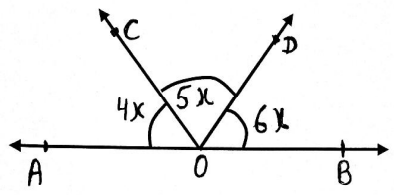
28. For what value of x will the lines l and m be parallel to each other.



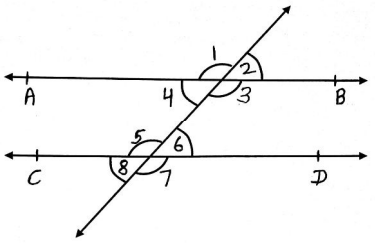
29. If a transversal intersects two parallel lines. Prove that the bisectors of any pair of corresponding angles so formed are parallel.

30. If the bisector of angels ∠B and ∠C of a triangle ABC meet at a point O, then prove that ∠BOC = 90°+ $\frac{1}{2}$ ∠A.

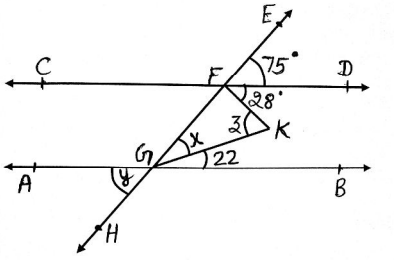
31. Find the value of x.



32. In figure, AB||CD and ∠1 : ∠4 = 3:2. Find all angles.



33. The given figure, find x, y and z if AB||CD.



34. If the area of an equilateral triangle is $16\sqrt{3}$ cm^2, then find the perimeter of the triangle.
35. The sides of a triangular field are $41m$, $40m$ and $9m$. Find the number of rose beds that can be prepared in the field, if each rose bed on an average needs 900 cm^2 space.
36. The area of a trapezium is 475cm^2, and the height is 19cm. Find the lengths of its parallel sides if one side is 4 cm greater than the other.
37. If each side of a triangle is doubled, then find the ratio of area of new triangle thus formed and the given triangle.
38. The lengths of the sides of a triangle are in the ratio 4:5:6 and its perimeter is 150cm. Find (i) the area of the triangle (ii) the height corresponding to the longest side.
39. Find the cost of laying grass in a triangular field of sides 50m, 65m and 65m at the rate of Rs. 7 per m^2.

40. A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 13 cm, 14 cm and 15 cm and the parallelogram stands on the base 14 cm. Find the height of the parallelogram.

Science:

Note: Do the Holiday work in your class note-book.

Biology : -

1. Draw the diagrams (Well labelled) of the following cell organelles from your refresher book.
   a) Nucleus b) Endoplasmic reticulum c) Golgi body
   d) Mitochondria e) Chloroplast
2. Draw well labelled diagram of plant cell and animal cell from your refresher book.
3. Define mitosis and meiosis (type of cell division) with the help of diagram.

Physics : -

1. Derive the 3-equations of motion (i) $v=u+at$: (ii) $S = ut + \frac{1}{2} at^2$; (iii) $2as = v^2-u^2$; graphically.
2. Define instantaneous speed with example from your daily life.
3. What do you understand by uniform circular motion? Give examples.
4. Write down question No. 4, 5, 6 & 7 from page No. 64 & 65 and solve them.

Chemistry : -

1. Give reasons for the following
   (a) Sugar and salt are solid but when kept in different jars, take their shapes.
   (b) Sponge is solid but we can compress it easily.
2. Define Latent heat of fusion and latent heat of vaporization.
3. Convert the following to Celsius and Fahrenheit scale:
   (a) 300 k (b) 353 k (C) 800 k
4. Read the activities 1.5, 1.11, 1.12 and 1.13 in NCERT and write their observation along with conclusion.

Note: - Complete your Note book and practical file in all respect.

S. St.

1. Prepare a project on the cyclone with special reference to 'Fani'.
   'फानी' चक्रवात के संदर्भ में एक परियोजना कार्य तैयार कीजिए।
2. Learn the following Lessons: -

   History :

   Lesson – 1 : The French Revolution फ्रांसीसी क्रांति

   Geography :

   Lesson -1 : India, Size and Location भारत आकार और स्थिति

Lesson-2 : Physical features of India भारत का भौतिक स्वरूप

Civics:

Lesson-1 : What is Democracy? Why is Democracy?
लोकतंत्र क्या ? लोकतंत्र क्यों ?

Lesson -2 : Constitutional Design संविधान निर्माण

Economics :

The story of village palampur पालमपुर गाँव की कहानी

Information Technology

1. Revise and Complete your Notebook. (Syllabus covered upto Summer Vacation)
2. Prepare a chart on any one of the topics given below:
   (i) Types of communication
   (ii) Application Areas of Internet
   (iii) Document Window in 00o Writer
   (iv) Types of Input / Output devices.
   (v) Parts of speech from Communication skills.
3. Prepare a project file containing atleast 10 pages and covering the following topics:
   (i) Applications/ features of word processor
   (ii) Indentation
   (iii) Page Orientation
   (iv) Find & Replace feature
   (v) Margins
   (vi) Word Art
   (vii) Text Selection
   (viii) Table
4. Find (atleast 20) shortcut keys from word processor and write in fair notebook.
   (PART B – Unit 1 : Word Processing Elementary)