



**SANT NIRANKARI PUBLIC SCHOOL**  
**AVTAR ENCLAVE**  
**HOLIDAYS HOMEWORK (2017-18)**  
**CLASS – IX**

**ENGLISH**

1. Prepare for the Periodic Test- I.
2. Read the novel ‘Three Men In a Boat’ thoroughly and write one important event from each chapter (Chapter 1 to 5) in 100 words each.
3. Write stories beginning with the following lines (in 120 words each) on A-4 sized sheets:
  - a. It was my birthday and I was very excited as my father promised-----
  - b. It was late night when I woke up suddenly to the noise of a door creaking-----
  - c. It was Independence Day. I and my friends were flying kites on my terrace. Just then we saw-----
  - d. It was a winter’s evening when I was doing my homework. I rubbed my eyes in surprise when I looked out of the window. There was an alien-----
4. Try to converse with your family and friends in English.
5. Read English newspaper daily (at least two full articles of your choice).
6. Watch informative and interesting programmes on Discovery, National Geographic or History Channel (in English).

**SOCIAL STUDIES**

1. Read, learn and revise all the chapters of the syllabus of Periodic -1.
2. Do a Project work on ‘Disaster Management’. (5 marks)  
  
# Projects should be made from eco- friendly products without incurring too much expenditure. It should be handwritten and comprise of not more than 15 fullscape pages.
3. Practice following maps and paste them in your map notebook. (5 marks)

**HISTORY**

Chapter 1 (labeling/ identification)

- a. Bordeaux
- b. Nantes
- c. Paris
- d. Marseilles

#### Chapter-2 (Locating/ Labelling/ Identification)

#### Major countries of First World War

- a. Central Powers – Germany, Austria- Hungary, Turkey
- b. Allied Powers – France, England, Russia, America.

### **GEOGRAPHY**

#### Chapter 1 (location/ labeling)

India – States with capitals, Tropic of Cancer, Standard Meridian, Southern most, Northern most, Eastern most and Western most point of India.

#### Chapter 2 (Location/ labeling)

- a. Mountain Ranges: The Karakoram, The Zaskar, The Shivalik, The Aravali, The Satpura, Western and Eastern Ghats
- b. Mountain Peaks: K2, Kanchenjunga, AnaiMudi
- c. Plateau: Deccan Plateau, Chota Nagpur, Plateau, Malwa Plateau
- d. Coastal Plains: Konkan, Malabar, Coromandal and Northern Circar

### **SCIENCE**

1. Revise the syllabus of Periodic Test- 1.
2. Write all the practical's of Term-1 in practical copy.( P&C)

### **FOUNDATION OF IT**

1. Surf the internet and find the applications of computer (with the areas where computers are being used with their images) and write in your school notebooks.
2. Make a presentation on Input/ Output/ Storage device, stating use of each (soft copy to be submitted in CD/DVD).
3. Make a list of abbreviations commonly used from the chapter Computer Fundamentals in school notebook.
4. Explain IPO Cycle with a neat diagram.(A4 sheet)
5. Make an attractive advertisement of a newly opened coaching center in your area in Ms Word using different shapes, pictures and clipart. (A4 Sheet)

## MATHEMATICS

1. Do all the assignments in separate Assignment Register.
2. Write all the formulas related to Class VIII in a separate thin notebook.
3. Do practice of chapters: Number System, Polynomial and Lines and Angles.

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NUMBER SYSTEM  
CLASS - IX  
HOLIDAYS HOMEWORK

1. Simplify :  $\sqrt{63} - 5\sqrt{28} + 11\sqrt{7}$

2. Simplify :  $5\sqrt{8} + 2\sqrt{32} - 2\sqrt{2}$

3. Simplify :  $3\sqrt{192} - \frac{2}{3}\sqrt{\frac{1}{3}} + \sqrt{\frac{1}{3}}$

4. Simplify :  $\sqrt[4]{625} - 4\sqrt[3]{64} + 20\sqrt[5]{32}$

5. Simplify :  $(\sqrt{5} - \sqrt{3})^2$

6. Simplify :  $(4\sqrt{3} - 3\sqrt{5})^2$

7. Simplify :  $16\frac{3}{4}$

8. Simplify :  $\frac{13\frac{1}{4}}{13 - \frac{5}{4}}$

9. Simplify :  $\left(\frac{3}{5}\right)^4 \left(\frac{8}{5}\right)^{-12} \left(\frac{32}{5}\right)^6$

10. Simplify :  $\left[(625^{-\frac{1}{2}})^{-\frac{1}{4}}\right]^2$

11. Simplify :  $\frac{8\frac{1}{3} \cdot 16\frac{1}{3}}{32\frac{1}{3}}$

12. If  $x, y, z$  are real numbers, show that  $\sqrt{x^{-1}y} \cdot \sqrt{y^{-1}z} \cdot \sqrt{z^{-1}x} = 1$

13. Show that  $\frac{x^{a(b-c)} \cdot x^{b(a-c)}}{\left(\frac{xb}{xa}\right)^c} = 1$

14. Rationalize the denominator :  $\frac{5+\sqrt{3}}{7-4\sqrt{3}}$

15. Simplify :  $\frac{2+\sqrt{3}}{2-\sqrt{3}} - \frac{2-\sqrt{3}}{2+\sqrt{3}}$

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NUMBER SYSTEM

CLASS-IX

ASSIGNMENT

1. Simplify :  $\frac{\sqrt{5}-2}{\sqrt{5}+2} - \frac{\sqrt{5}+2}{\sqrt{5}-2}$

2. Simplify :  $\frac{4\sqrt{2}}{\sqrt{15}-3\sqrt{2}} + \frac{3\sqrt{5}}{\sqrt{10}-\sqrt{13}} + \frac{5\sqrt{3}}{\sqrt{6}+\sqrt{5}}$

3. Simplify :  $\frac{1}{2-\sqrt{3}} - \frac{1}{\sqrt{3}+\sqrt{2}} + \frac{5}{3-\sqrt{2}}$

4. Find the value of a and b :  $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a-b\sqrt{3}$

5. Find the value of a and b :  $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a+b\sqrt{6}$

6. Rationalize the denominator :  $\frac{4\sqrt{3}+5\sqrt{2}}{\sqrt{48}+\sqrt{18}}$

7. Find the value of a and b if :  $\frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{\sqrt{7}+1}{\sqrt{7}-1} = a+b\sqrt{7}$

8. If  $\sqrt{2} = 1.414$  and  $\sqrt{3} = 1.732$  then find the value of  $\frac{\sqrt{6}-1}{\sqrt{3}}$  upto three places of decimal.

9. If  $a = 8+3\sqrt{7}$  and  $b = \frac{1}{a}$ , then what will be the value of  $a^2+b^2$ ?

10. If  $a = \frac{\sqrt{3}+1}{\sqrt{3}-1}$  and  $b = \frac{1}{a}$ , find the value of  $a^2-b^2+ab$ .

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NUMBER SYSTEM

CLASS - IX

ASSIGNMENT

1. Insert a rational number b/w the following:

(i) 6 and 7 (ii)  $\frac{1}{7}$  and  $\frac{1}{8}$  (iii)  $\frac{2}{3}$  and  $\frac{7}{8}$  (iv) 1 and 1.1

2. Find five rational numbers b/w:

(i)  $\frac{3}{8}$  and  $\frac{5}{8}$  (ii) -3 and 2 (iii)  $\frac{4}{9}$  and  $\frac{4}{11}$

3. Write the following in decimal form and find what kind of decimal expansion they have.

(i)  $\frac{216}{1000}$  (ii)  $\frac{2}{11}$  (iii)  $6\frac{1}{8}$

4. Express the following in the form  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .

(i)  $8.\overline{325}$  (ii)  $3.\overline{8}$  (iii)  $1.00\overline{49}$

5. What do you mean by irrational number.

6. Locate the following numbers on the number line (i)  $\sqrt{2}$  (ii)  $\sqrt{7}$ .

7. Represent geometrically the following numbers on the number line:

(i)  $\sqrt{5.6}$  (ii)  $\sqrt{8.1}$

8. Rationalize the denominator:  $\frac{1}{\sqrt{3} + \sqrt{2} - \sqrt{5}}$

9. If  $a = 5 - 2\sqrt{6}$ , then find the value of:

(a)  $\sqrt{a} - \frac{1}{\sqrt{a}}$

(b)  $a^2 + \frac{1}{a^2}$

10. If  $a = 9 + 4\sqrt{5}$  and  $b = \frac{1}{a}$ , then find the value of:

(a)  $a^2 + b^2$

(b)  $a^3 + b^3$



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POLYNOMIALS

CLASS-IX

ASSIGNMENT

1. When an algebraic expression is known as polynomial in one variable?
2. Which of the following expressions are polynomials and which are not. State reasons for your answer:  
(i)  $11x + 1$  (ii)  $7x^2 - 5x + \sqrt{5}$  (iii)  $t^3 - 2t + 1$   
(iv)  $x^2 - \frac{1}{x^2}$  (v)  $\sqrt{y} + 5y - 1$  (vi)  $z^{11} - 5z^7 + \frac{1}{4}$
3. Write a monomial of degree 40, a binomial of degree 50 and a trinomial of degree 60.
4. Write the coefficient of  $x^3$  in each of the following:  
(i)  $x^3 - 3x + 2$  (ii)  $14 - 2x^3 + 5x - 7x^2$  (iii)  $\sqrt{2}x^2 + 1$  (iv)  $\frac{3}{4}x^3 + 2x - 3$
5. Write the degree of each of the following polynomials:  
(i)  $3x^2 - 4x + 2$  (ii)  $7x^3 + 2x^2 + x$  (iii)  $5 - x^2$  (iv)  $1 + 2x + 3x^2 - 11x^4$  (v)  $4y + 3$
6. Classify the following as linear, quadratic and cubic polynomials:  
(i)  $x^3 - 4$  (ii)  $x^2 + 1$  (iii)  $5x^2 - 3x + \sqrt{7}$   
(iv)  $1 + 5x$  (v)  $4x^3$  (vi)  $10x$
7. Find the value of  $p(x) = x^3 - 3x^2 + 5x + 7$  at  
(i)  $x = 0$  (ii)  $x = 1$  (iii)  $x = 2$
8. Find  $p(0)$ ,  $p(-1)$  and  $p(3)$  for each of the following:  
(i)  $p(x) = x^2 - 3x$  (ii)  $p(x) = x^3 + 1$  (iii)  $p(x) = -x^5$  (iv)  $p(t) = t^2 + 2t + 1$
9. Verify whether the indicated number(s) given against each are zeroes of the corresponding polynomial:  
(i)  $p(x) = 5x - 1, x = \frac{1}{5}$  (ii)  $q(x) = 7x + 1, x = \frac{1}{7}$  (iii)  $p(x) = 11x - 4, x = \frac{4}{11}$   
(iv)  $p(x) = (x-2)(x-5), x = 2, 5$  (v)  $s(x) = x^2, x = 0, 1$  (vi)  $p(x) = cx + d, x = \frac{d}{c}$   
(vii)  $p(x) = 3x^2 - 1, x = -\frac{1}{3}, \frac{2}{3}$  (viii)  $g(x) = 5x^2 + 7x, x = 0, -\frac{7}{5}$



10. Find the zeroes of each of the following polynomial:

(i)  $p(x) = x - 4$

(ii)  $g(x) = 2x + 1$

(iii)  $p(x) = (x + 2)(x - 2)$

(iv)  $r(x) = (2x - 1)(2x + 1)$

(v)  $p(x) = 7x$

(vi)  $p(x) = ax, a \neq 0$

(vii)  $p(x) = rx + s, r \neq 0$

(viii)  $p(x) = (-1)(x - 2)(x - 3)$

11. Show that 5 is a zero of the polynomial  $2x^3 - 7x^2 - 16x + 5$ .

12. Show that 2 is not a zero of the polynomial  $3x^3 - 4x^2 + 2x - 4$ .

13. Show that 1, -1 and 3 are all zeroes of the polynomial  $x^3 - 3x^2 - x + 3$ .

14. By actually dividing and by using the remainder theorem, find the remainder when  $f(x)$  is divided by  $g(x)$  and verify that the remainders in both cases are same.

(i)  $f(x) = x^3 + 4x^2 - 3x - 10, g(x) = x + 4$

(ii)  $f(x) = 4x^4 - 3x^3 - 2x^2 + x - 7, g(x) = x - 1$

(iii)  $f(x) = 2x^4 - 6x^3 + x^2 - x + 2, g(x) = x + 2$

(iv)  $f(x) = x^3 - 5x^2 + x - 5, g(x) = 1 - 3x$

15. Using Remainder Theorem find the remainder when  $f(x)$  is divided by  $g(x)$ :

(i)  $f(x) = x^{23} - x^{19} - 1, g(x) = x + 1$

(ii)  $f(x) = x^3 - 4x^2 + 2x + 7, g(x) = x + \frac{1}{2}$

(iii)  $f(x) = 9x^3 - 3x^2 + x - 5, g(x) = x - \frac{2}{3}$

(iv)  $f(x) = 3x^4 + 2x^3 - \frac{1}{3}x^2 - \frac{1}{9}x + \frac{2}{27}, g(x) = x + \frac{2}{3}$

16. By Remainder theorem show that  $3x^3 + 11x^2 + x - 15$  is a multiple of  $x - 1$ .

17. Check whether the polynomial  $g(t) = 4t^3 + 4t^2 - t - 1$

18. Determine which of the following polynomial  $x - 1$  is a factor of

(i)  $x^3 - x^2 - x + 1$

(ii)  $x^4 - 2x^3 + x^2 + x - 1$

(iii)  $x^3 + 3x^2 + 5x + 7$

(iv)  $x^4 - 3x^3 + 3x^2 + x - 2$

19. Show that  $x+2$  is a factor of the polynomial  
 $x^3 + 3x^2 + 3x + 2$

20. Use factor theorem to determine whether  $g(x)$  is a factor of  $p(x)$  in each of the following cases.

(i)  $p(x) = 3x^2 - 5x + 2, g(x) = 3x - 2$

(ii)  $p(x) = x^4 - x^3 + x - 1, g(x) = x - 2$

(iii)  $p(x) = x^5 - x^4 + 3x^2 - 2x + 4, g(x) = x - 2$



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POLYNOMIALS

CLASS-IX

ASSIGNMENT

1. Using Remainder Theorem find the remainder when  $f(x)$  is divided by  $g(x)$ :  
 $f(x) = x^{23} - x^{19} - 1$ ,  $g(x) = x + 1$
2. Using Remainder Theorem find the remainder when  $f(x)$  is divided by  $g(x)$ :  
 $f(x) = x^3 - 4x^2 + 2x + 7$ ,  $g(x) = x + \frac{1}{2}$
3. Using Remainder Theorem find the remainder when  $f(x)$  is divided by  $g(x)$ :  
 $f(x) = 9x^3 - 3x^2 + x - 5$ ,  $g(x) = x - \frac{2}{3}$
4. Using Remainder Theorem find the remainder when  $f(x)$  is divided by  $g(x)$ :  
 $f(x) = 3x^4 + 2x^3 - \frac{1}{3}x^2 - \frac{1}{9}x + \frac{2}{27}$ ,  $g(x) = x + \frac{2}{3}$
5. Find the value of 'K' if  $x-1$  is a factor of  $2x^2 + Kx + \sqrt{2}$
6. For what value of 'a' is the polynomial  $x^3 + 2x^2 - 3ax - 8$  is a multiple of  $x-4$ ?
7. Find the value of 'p' for which the polynomial  $2x^4 + 3x^3 + 2px^2 + 3x + 6$  is divisible by  $x+2$ .
8. Determine the value of 'b' for which the polynomial  $5x^3 - x^2 + 4x + b$  is divisible by  $1-5x$ ?
9. For what value of 'm' is the polynomial  $2x^4 - mx^3 + 4x^2 + 2x + 1$  divisible by  $1-2x$ .
10. Find the values of 'a' and 'b' so that the polynomial  $x^3 + 10x^2 + ax + b$  is exactly divisible by  $x-1$  and  $x+2$ .

11. If  $x^3 + px^2 + qx + 6$  has  $x-2$  as a factor and leaves remainder 3 when divided by  $x-3$ , find the values of  $p$  and  $q$ .
12. The polynomials  $ax^3 + 3x^2 - 13$  and  $2x^3 - 5x + a$  are divided by  $x-2$ . The remainder in each case is the same. Find the value of 'a' and 'b'.
13. Find the value(s) of 'b' if  $b^2x^3 - bx^2 + 3bx - b$  is exactly divisible by  $x-3$ .
14. Find 'a' and 'b' if  $x-1$  and  $x-2$  exactly divide the polynomial  $x^3 + ax^2 - bx + 10$ .
15. Find the values of 'h' and 'k' if  $x+1$  and  $x-2$  are factors of the polynomial  $x^3 + kx^2 + hx + 6$ .
16. If  $x-3$  and  $x-\frac{1}{3}$  are both factors of  $px^2 + 5x + r$ , then show that  $p=r$ .
17. Show that  $(x-2)(x+3)$  and  $(x-4)$  are factors of  $x^3 - 3x^2 - 10x + 24$ .
18. Show that  $(x+4)(x-3)$  and  $(x-7)$  are factors of  $x^3 - 6x^2 - 19x + 84$ .
19. Find the value of  $a$ , if  $x+2$  is a factor of  $4x^4 + 2x^3 - 3x^2 + 8x + 5a$ .
20. Find the value of  $k$  if  $x-3$  is a factor of  $k^3x^3 - kx^2 + 3kx - k$ .
21. Find the value of  $a$  and  $b$ , if  $x^2 - 4$  is a factor of  $ax^4 + 2x^3 - 3x^2 + bx - 4$ .
22. Find the values of  $p$  and  $q$  so that  $x^4 + px^3 + 2x^2 - 3x + q$  is divisible by  $(x^2 - 1)$ .
23. Find the values of 'a' and 'b' so that  $(x+1)$  and  $(x-1)$  are factors of  $x^4 + ax^3 - 3x^2 + 2x + b$ .
24. If  $x^3 + ax^2 - bx + 10$  is divisible by  $x^2 - 3x + 2$ . Find the values of 'a' and 'b'.
25. If both  $x+1$  and  $x-1$  are factors of  $ax^3 + x^2 - 2x + b$ , find the values of 'a' and 'b'.



26. Factorize:  $x^2 + 7x + 12$
27. Factorize:  $6x^2 - 5x - 6$
28. Factorize:  $x^3(s-t)^3 + s^3(t-x)^3 + t^3(x-s)^3$
29. Factorize:  $6x^2 + 17x + 12$
30. Factorize:  $3x^3 - x^2 - 10x$
31. Factorize:  $5x^2 + 33xy - 14y^2$
32. Factorize:  $7(x-2y)^2 - 25(x-2y) + 12$
33. Factorize:  $a^2 + 3a - 88$
34. Factorize:  $a^2 - 14a - 51$
35. Factorize:  $x^2 - 11x - 42$
36. Factorize:  $x^2 - 22x + 120$
37. Factorize:  $5x^2 - 32x + 12$
38. Factorize:  $a^2 + 14a + 48$
39. Factorize:  $x^2 - 4x - 21$
40. Factorize:  $40 + 3x - x^2$
41. Factorize:  $x^2 + 7xy + 12y^2$
42. Factorize:  $y^3 - 23y^2 + 112y - 120$
43. Factorize:  $2y^3 - 5y^2 - 19y + 42$
44. Factorize:  $x^3 + 5x^2 - 4x - 20$
45. Factorize:  $x^3 + 13x^2 + 32x + 20$ .



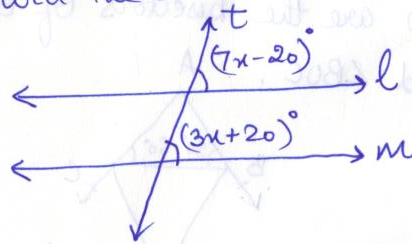
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## Lines and Angles

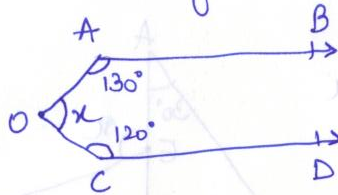
CLASS - IX

### ASSIGNMENT

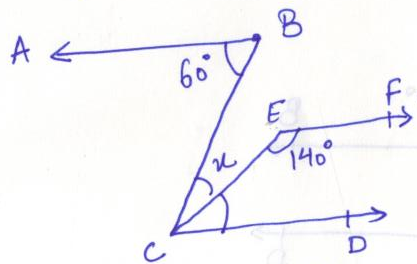
1. Find the angle whose supplement is six times its complement.
2. For what value of  $x$  will the lines  $l$  and  $m$  be parallel to each other?



3. In fig  $AB \parallel CD$ . Find the value of  $x$



4. In fig, find  $x$  if  $AB \parallel CD \parallel EF$ .



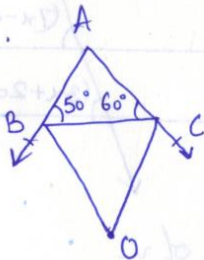
5. If two parallel lines are intersected by a transversal, prove that the bisectors of the interior angles on the same side of transversal intersect each other at right angles.

6. If a transversal intersect two parallel lines, prove that the bisector of any pair of corresponding angles so formed are parallel.

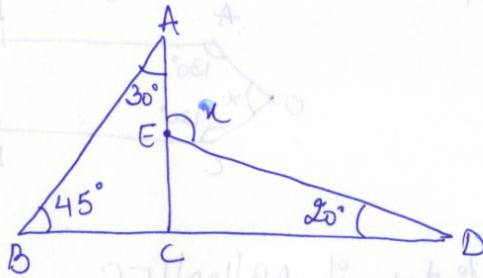
7. Prove that the sum of the angles of a triangle is  $180^\circ$ .

8. If the bisector of angles  $\angle B$  and  $\angle C$  of a triangle  $ABC$  meet at a point  $O$ , then prove that  $\angle BOC = 90^\circ + \frac{1}{2}\angle A$ .

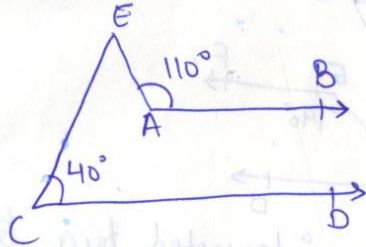
9. In fig,  $BO$  and  $CO$  are the bisectors of exterior angles  $\angle B$  and  $\angle C$  of  $\triangle ABC$ . Find  $\angle BOC$ .



10. In fig, find the value of  $x$

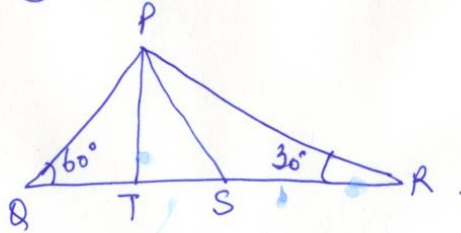


11. In fig,  $AB \parallel CD$ . Find  $\angle AEC$



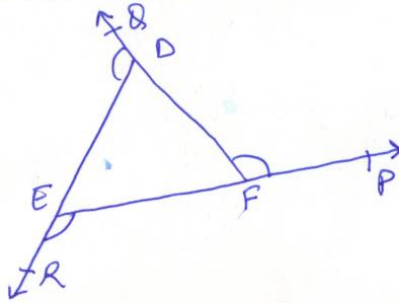
12. Prove that if arms of an angle are respectively parallel to the arms of another angle, then the angles are either equal or supplementary.

13. In fig,  $PT \perp QR$  and  $PS$  is the bisector of  $\angle P$ . If  $\angle Q = 60^\circ$  and  $\angle R = 30^\circ$ , find  $\angle TPS$ .

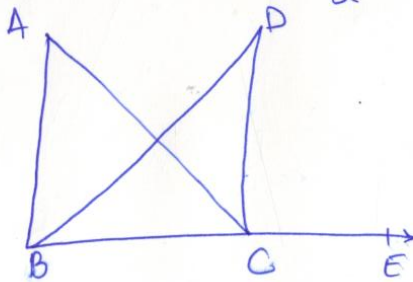


14. Prove that if a side of a triangle is produced then the exterior angle so formed is equal to the sum of the two interior opposite angles.

15. In fig,  $\angle DFP$ ,  $\angle EDQ$  and  $\angle FER$  are exterior angles of  $\triangle DEF$ .  
Prove that  $\angle DFP + \angle EDQ + \angle FER = 360^\circ$



16. In fig,  $BD$  and  $CD$  are angle bisector of  $\angle ABC$  and  $\angle ACE$  respectively. Prove that  $\angle BDC = \frac{1}{2} \angle BAC$ .





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COORDINATE GEOMETRY

Class - IX

Assignment -  
DAY-14.

1. Write the answer of each of the following questions:

- (i) What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?
- (ii) What is the name of each part of the plane formed by these two lines?
- (iii) Write the name of the point where these two lines intersect.
- (iv) Write the abscissa and ordinate of the point with coordinates (8, 10).
- (v) Do the ordered pairs (4, -2) and (-2, 4) represent the same point in the coordinate plane?
- (vi) What are the abscissa and ordinate of the origin?

2. Fill in the blank spaces in each of the following statements (Fig. 1);

- (i) The abscissa and ordinate of the point P are ----- and ----- respectively.
- (ii) The x-coordinate and y-coordinate of the point Q are ----- and ----- respectively.
- (iii) The x coordinate and y-coordinate of the point R are ----- and ----- respectively.

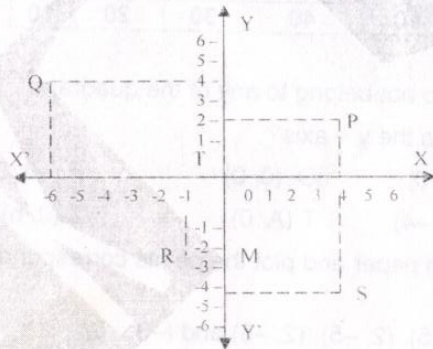


Fig. 1

- (iv) The abscissa and ordinate of the point S are ----- and ----- respectively.
- (v) The coordinates of the points P, Q, R and S are -----, -----, ----- and -----.

3. Write the coordinates of a point which

- (i) lies on the x-axis and is at a distance of 4 units to the right of the origin.
- (ii) lies on the x-axis and at a distance of 7 units to the left of the origin.
- (iii) lies on the y-axis and at a distance of 3 units above x-axis.
- (iv) lies on the y-axis and is at distance of 5 units below x-axis.

COORDINATE GEOMETRY

4. State the quadrant in which each of the following points lie:
- (i) (2, 1)      (ii) (5, 2)      (iii) (-7, 11)      (iv) (2, 2)      (v) (-6, -4)  
 (vi) (5, -11)      (vii) (6, -6)      (viii) (-5, -5)      (ix) (-7, 7)      (x) (-4, -6)

5. Which of the following points belong to the x-axis?
- A (2, 0)      B (3, 3)      C (4, -1)      D (0, 1)      E (0, -5)  
 F (0, -8)      G (-2, 0)      H (0, 8)      I (-a, 0)      J (0, b)

6. The following table gives the relation between natural numbers and odd natural numbers

X	1	2	3	4	5
Y	3	5	7	9	11

7. Plot each of the following points in a Cartesian plane:  
 (i) (3, 4)      (ii) -3, -4      (iii) 0, -5      (iv) 2, -5      (vi) 2, 0  
 Use the scale 1 cm = 1 unit on the axes
8. Find some ordered pairs of the linear equation  $2x + y = 4$  and plot them. How many such ordered pairs can be found and plotted?
9. The following table gives measures (in degrees) of two acute angles of a right triangle

X	10	20	30	40	50	60	70	80
Y	80	70	60	50	40	30	20	10

10. Name the points of the plane which do not belong to any of the quadrant.
11. Which of the following points belong to the y-axis?
- L (5, 5)      M (0, 5)      N (3, 0)      O (0, 0)      P (-6, 0)  
 Q (0, -8)      R (-2, 0)      S (0, -4)      T (a, 0)      Z (0, b)
12. Make a coordinate system on a graph paper and plot the points corresponding to the following ordered pairs  
 (2, 6), (1, 5), (0, 1), (2, 0), (0, 0), (-3, 5), (2, -5), (2, -5) and (-3, -5)

## ASSIGNMENT – LINEAR EQUATION

1. Draw the graphs of linear equations  
 $y = x$  and  $y = -x$  on the same cartesian plane.  
What do you observe?
2. Determine the point on the graph of the linear equation  $2x + 5y = 19$ , whose ordinate is  $1\frac{1}{2}$  times its abscissa.
3. Draw the graph of the equation represented by a straight line which is parallel to the  $x$ -axis and at a distance 3 units below it.
4. Draw the graph of the linear equation whose solutions are represented by the points having the sum of the coordinates as 10 units.
5. Write the linear equation such that each point on its graph has an ordinate 3 times its abscissa.
6. If the point (3, 4) lies on the graph of  $3y = ax + 7$ , then find the value of  $a$ .
7. How many solution(s) of the equation  $2x + 1 = x - 3$  are there on the :  
(i) Number line (ii) Cartesian plane
8. Find the solution of the linear equation  $x + 2y = 8$  which represents a point on  
(i)  $x$ -axis (ii)  $y$ -axis
9. For what value of  $c$ , the linear equation  $2x + cy = 8$  has equal values of  $x$  and  $y$  for its solution.
10. Let  $y$  varies directly as  $x$ . If  $y = 12$  when  $x = 4$ , then write a linear equation. What is the value of  $y$  when  $x = 5$ ?

## ASSIGNMENT –EUCLID’S GEOMETRY

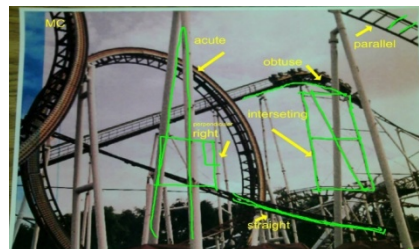
- Q1. Define :
- |                        |                       |
|------------------------|-----------------------|
| (i) Axioms             | (ii) Theorems         |
| (iii) Collinear Points | (iv) Concurrent lines |

Q2. Differentiate between parallel lines and intersecting lines.

Q3. Given two distinct points A and B, can there be a line that passes through A and B? How many such lines are there?

Q4. If  $l$  and  $m$  are intersecting lines,  $l \parallel p$  and  $m \parallel q$ , show that  $p$  and  $q$  also intersect.

Q5. If line segments AB, AC, AD and AE are parallel to a line  $l$ , then points A, B, C, D and E are collinear. Is it true?





Q6. Two lines which are both parallel to the same line, are parallel to each other. Prove it.

Q7. Write five postulates given by Euclid.

Q8. Define a) Line segment b) Parallel lines c) Ray

## HINDI

ग्रीष्मावकाश कार्य (२०१७)  
कक्षा - नवीं, विषय - हिंदी

classmate

Date \_\_\_\_\_  
Page \_\_\_\_\_

① कक्षा में पढ़ाए गए प्रत्येक पाठ में से पाँच-पाँच उपसर्ग व प्रत्यय युक्त शब्द छांटकर उनमें से उपसर्ग, प्रत्यय व मूल शब्द अलग कीजिए।

② संयुक्त व्यंजन, अनुस्वार, श्लेष व पदेन से निर्मित पाँच-पाँच शब्द लिखकर उनका वर्ण-विच्छेद कीजिए।

③ नए मोबाइल फ़ोन हेतु २०-२५ शब्दों में एक विज्ञापन तैयार कीजिए।

④ नाटिका मंचन के लिए २०-२५ शब्दों में एक विज्ञापन तैयार कीजिए।

⑤ दूरदर्शन के अपने सबसे मनपसंद कार्यक्रम की चर्चा करते हुए अपने मित्र को पत्र लिखिए।

⑥ प्रथम आवाधिक परीक्षा का सम्पूर्ण पाठ्यक्रम याद कीजिए।

टिप्पणी :- सम्पूर्ण कार्य सुंदर लिखावट में व्याकरण गृह कार्य पुस्तिका (कॉपी) में कीजिए।

25/5/19