

R.E.D. SCHOOL, CHARKHI (BHIWANI)

Subject - Mathematics

Holiday Homework Assignment

Standard - 6th

Name : **Section :** **Roll**
No.

1. Write the largest and smallest number using each of the digits 1, 4, 6, 8, 0 only once and find their difference.
2. Write the successor and predecessor of 99999 and find their difference.
3. A bottle of medicine contains 200 ml of medicine. How many bottles will be required to fill 65 litres of medicine?
4. How many millions make a crore?
5. The difference between two numbers is 9476583. If the smaller number is 6873547, find the greater number?
6. Find the value of the following using suitable properties:
a) $81265 \times 169 - 81265 \times 69$ b) 9538×39
7. Find using number line:
a) $8 - 5$ b) $-6 - 3$
8. Solve the following and give answers in Roman numerals.
a) $\text{XCVIII} - \text{LXIX}$ b) $\text{MDV} + \text{CDIX}$
9. Estimate the following by rounding off each number to nearest tens:
a) 9250×29 b) 3841×23
10. Estimate the sum by rounding off each number to nearest hundreds:
a) $592 + 217$ b) $2976 + 2087$
11. Determine the difference of two place values of 7 in the number 'Seventeen million four hundred thirty two thousand two hundred seven'.
12. The number of students in class 1, 2, 3, 4 and 5 in a district are 36510, 18700, 12540, 17825 and 16571. Find the total number of students in primary classes.
13. Convert 5 Km 17 meter to meters.

25. Denielle placed 5 weights on a weighting machine during science class. If each weight weighed 0.2 grams, what did the scale read ?

ACTIVITY WORK

1. **The following activities are to be done according to roll numbers:**
- a) Prepare a chart (A - 3 size) showing 'Application of Mathematics' in Arts or nature. **(Roll no. 1-10)**
 - b) Make 3D models of 3 geometrical shapes and write number of their edges, vertices and faces.

(Roll no. 11-20)
 - c) Make rangoli on a chart (A - 3 size) with different geometrical shapes.
(Roll no. 21-30)
 - d) Make a 3D model (such as home, joker, etc.) using combination of more than 1 3D shapes.

(Roll no. 31-40)

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Standard - 7th

Name : **Section :** **Roll**

No.

1. On the 1st day your summer vacations.
Write down all the new terms from block 7 to block 12 on a sheet of paper. After learning each term, put a cross (×) over it. By the end of vacations check your own progress. Share this sheet with your class mates on 1st July.
2. On a chart write the process for dividing different type of fractions. Give an example of each process. (Even Roll Numbers only)

OR

- On a chart write the process for multiplying different type of fractions. Give an example of each process. (Odd Roll Numbers only)
3. Make a 5 page booklet explaining addition and subtraction of like & unlike fractions and decimals. Include examples of the methods & on the last page, write some problems from real-life situations.
 4. Make a 6 page booklet explaining properties of integers for all the operations. Include examples of the methods.
 5. Solve the following questions in your C.W. note book (Maths)

<i>Block No.</i>	<i>Q.No.</i>	<i>Pg. No.</i>	<i>Block No.</i>	<i>Q.No.</i>	<i>Pg. No.</i>
1	15, 12	14	2	4	23
3	19, 18	30	4	10, 7	40
5	16, 20	47	6	15, 19	55
6	4, 5	56			

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Subject - Mathematics

Holiday Homework Assignment

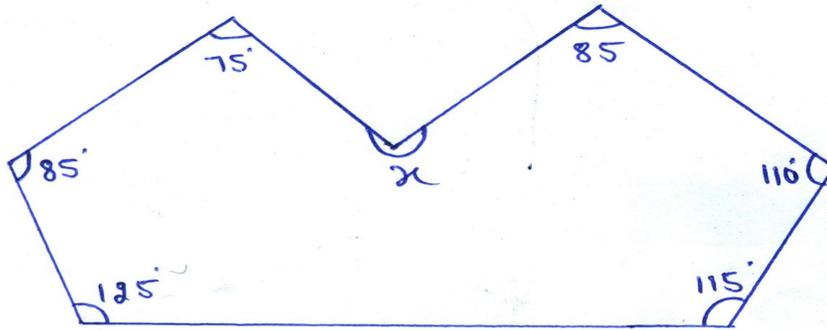
Standard - 8th

Name : **Section :** **Roll**

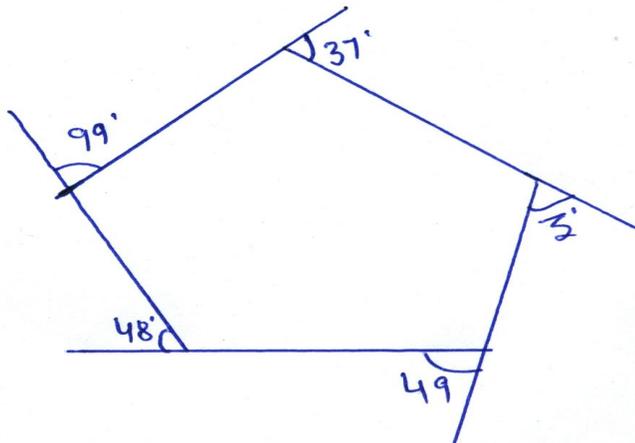
No.

1. Find the mean of the numbers 22 and 23.
2. Use mean to find 4 rational numbers between -20 and -30 .
3. Convert and rational numbers in to decimals.
4. Express 0.176 and 1.32 in rational form.
5. Find $(x + y) \div (x - y)$ of $x =$ and $y =$.
6. express into rational form.
7. Express in form and find sum of p and q.
8. Solve : i) \times ii) $+$
9. using associative property find the sum $+$ $+$
10. Find the multiplicative inverse of \times
11. To solve apply the distributive property of multiplication over subtraction.
12. i) Zero has reciprocal.
ii) The numbers and are there own reciprocals.
13. Find the sum of multiplicative and additive inverse of 4.
14. Is 0.6 is the multiplicative inverse of 1 ? Why ?
15. Solve $x - 25 = 15$
16. $- 3x = 1$, find x
17. Find y if $2y + 3 = y + 7$
18. Find n,
19. Reema is 4 years older than her brother Rohan. The ratio of their ages is 5 : 7. Find their ages.
20. The length of a rectangle is 10 m more than its breadth. If its perimeter is 120 m. Find its length and breadth.
21. Find m if
22. The sum of the ages of Ram and his brother is 15 years and the difference between their ages is 3 years. (Find their ages)

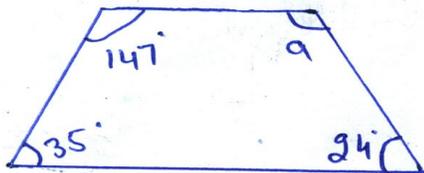
23. What is a polygon ?
24. What is the sum of interior angle of any polygon ?
25. Prove the angle sum property of a heptagon.
26. What is the measure of one of the angles in a regular decagon ?
27. What is the measure of one of the exterior angles in a regular polygon ?
28. Find x :



29. How many diagonals in a regular hexagon ?
30. Find z .

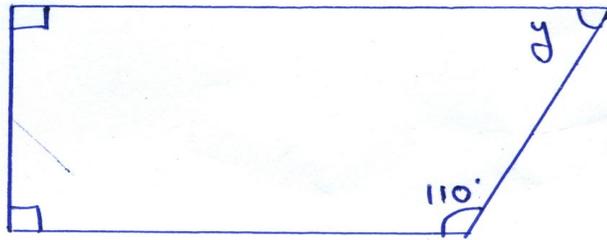


31. Draw a quadrilateral and its diagonal label on it.
32. Find the measure of angle a .

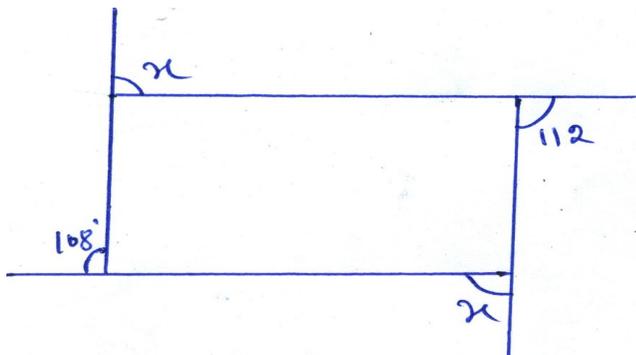


33. The perimeter of a kite is 40 cm. What are the lengths of the other 3 sides, if the length of one of its sides is 15 cm.
34. What is the measure of each of the 4 angles in a quadrilateral if they are in the ratio $3 : 5 : 6 : 10$?

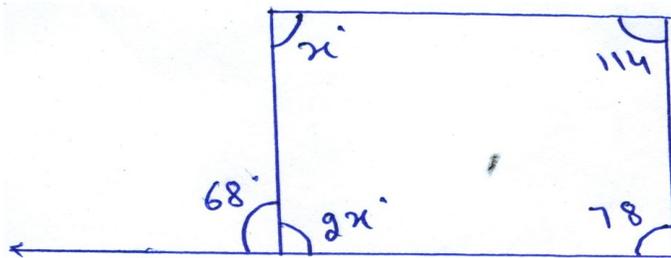
35. Find angle y in the figure



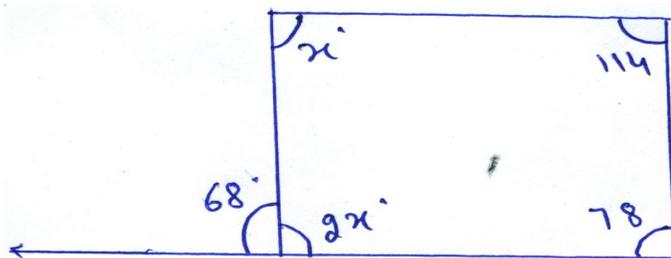
36. Find x



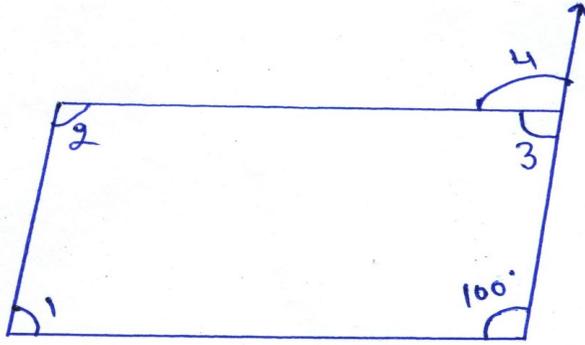
37. An isosceles trapezium has a perimeter of 50 cm. What would be the length of the non parallel sides if the parallel sides have length as 27 cm and 13 cm.
38. Find x



39. What is the perimeter of the parallelogram ABCD if the length of its 2 sides are 6.2 cm and 4.7 cm?
40. Draw a parallelogram and its diagonals.
41. Find the value of x for the given ||gm.



42. Find the value of angles 1, 2, 3 and 4 for given parallelogram.



43. ABCD is a parallelogram. Find the length of AO if $BD = 10$ cm and OD is twice of OC.
44. i) The sum of all angles of a quadrilateral is 360° .
 ii) All quadrilateral are parallelogram.
 iii) All quadrilateral will have only 2 diagonals.
 State true / false.
45. Construct a triangle with the lengths of its sides as 5 cm, 3 cm and 4 cm.
46. Construct quadrilateral PQRS if $PQ = 5$ cm, $QR = 3$ cm, $RS = 5$ cm, $PS = 4$ cm and $PR = 6$ cm.
47. Construct a rhombus with the length of its two diagonals as 10 cm and 8 cm respectively.
48. Construct a square whose one side is 6 cm.
49. Construct a rectangle ABCD with the given measures.
 $AB = 5$ cm and $BC = 4$ cm
50. How can we construct a parallelogram ABCD with the given measurement ?

Chart Work

Make one chart each students of Block-7 to Block-16 of objective :

- i) Block 7, 8 ii) Block 9, 10 iii) Block 11, 12
 iv) Block 13-14 v) Block 15-16

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Standard - 9th

Name : **Section :** **Roll**
No.

1. Simplify :
2. , and write in descending order
3. Rationalise the denominator
4. If $x = 7 +$ then find
5. Find the value of x, if
6. Find the value of
7. Find 10 rational no. between and
8. Express in the form of
9. Find the value of x if
10. Represent on the number line.
11. Make chart using the identities :
 $(a + b)^2, (a - b)^2, a^2 - b^2, a^3 + b^3, a^3 - b^3, (a + b)^3, (a - b)^3, (a + b + c)^2, (x + a)(x + b)$
you are leave some of these. But letter should be in proper way (large size)
12. Show that $(3x - 2)$ is a factor of $3x^3 + x^2 - 20x + 12$.
13. If $4a^2 + b^2 = 40$ and $ab = 6$ then find $2a + b$
14. If $x + y = 3, xy = 2$, find $x^3 + y^3$
15. Evaluate : if $= 6$
16. Simplify : $(x + 2y - 5z)^2 - (x - 2y + 5z)^2$
17. Factorise : $x^3 - 3x^2 + 3x + 7$
18. Reduce to lowest terms.
19. If $= 6$ then find
20. Factorise : $x^3 + 27$
21. If $x + 1$ is a factor of the polynomial $2x^2 + kx$, then find the value of k.
22. If $x + a$ is a factor of $x^4 - a^2x^2 + 3x - 6a$, then the value of a.
23. Find common factor of $x^2 - 1, x^4 - 1$ and $(x - 1)^2$

24. If $p(x) = 2x^2 - 3x + 5$, then the value of
25. Factorise : $8x^3 + 27y^3 + 64z^3 - 72xyz$
26. Write down Euclid Axioms.
27. Write down Euclid Postulates.

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No.

Multiple Choice Questions :

1. The perimeter of a rhombus is 20 cm. If one of its diagonals is 6 cm, then its area is
a) 28 cm² b) 36cm² c) 24cm² d) 20cm²
2. An isosceles right triangle has area 8 cm². The length of the hypotenuse is
a) 6 cm b) cm c) 8 cm d) 4 cm
3. The area of an isosceles triangle having base 20 cm and length of one of the equal sides 20 cm is
a) 480 cm² b) 196 cm² c) 240 cm² d) 192 cm²
4. The perimeter of an isosceles triangle is 32 cm. The ratio of the equal side to its base is 3 : 2. Then area of the triangle is
a) 32 cm² b) 32 cm² c) 16 cm² d) 16 cm²
5. If the perimeter and base of an isosceles triangle are 11 cm and 5 cm respectively, then its area is
a) cm² b) cm² c) cm² d) cm²
6. The sides of a triangle are 13 cm, 14 cm and 15 cm. The length of the shortest altitude is
a) 12 cm b) 11.2 cm c) 12.9 cm d) 11.9 cm
7. The sides of a triangle are 17 cm, 25 cm and 26 cm. The length of the altitude to the longest side correct upto two places of decimals is
a) 16.32 cm b) 34.00 cm c) 15.69 cm d) 24.00 cm
8. If the perimeter of a rhombus whose diagonals measure 12 cm and 16 cm is equal to the perimeter of an isosceles triangle having its equal side and the base in the ratio 3 : 2, then area of the isosceles triangle is
a) 50 cm² b) 25 cm² c) 75 cm² d) 100 cm²

Short Answer Questions :

9. Find the area of a triangle whose base and altitude are 10 cm and 7 cm respectively.
10. Find the area of a triangle whose side are 13 cm, 14 cm and 15 cm.
11. Find the area of a triangle, two sides of which are 9 cm and 12 cm and the perimeter is 36 cm.
12. The sides of a triangle are in the ratio 3 : 5 : 7. Find its area if its perimeter is 60 cm.
13. Using Heron's Formula, find the area of an equilateral triangle whose perimeter is 24 cm.

Solve questions using Heron's Formula

14. The height of an equilateral triangle is 6 cm. Find the area of the triangle.
[Take $\sqrt{3} = 1.732$]
15. Find the area of an isosceles in the area of a triangle each of whose equal sides is 13 cm and whose base is 24 cm.
16. Find the percentage increase in the area of a triangle if each of its side is doubled.
17. A rhombus shaped sheet with perimeter 40 cm and diagonal 12 cm is painted on both sides at the rates Rs. 5 per cm^2 . Find the cost of painting.
18. The interwove isosceles triangles in sriyantra are arranged in such a way that the number of subsidiary triangles they produce are
a) 40 b) 43 c) 45 d) 50
19. A pyramid is a solid figure, the base of which is
a) only a square b) only a triangle c) only a rectangle d) any polygon
20. The side faces of a pyramid are
a) squares b) triangles c) polygons d) trapeziums
21. In ancient India, the shapes of altars used for household rituals were
a) square and rectangular b) square and circular
c) triangular and rectangular d) square and triangular
22. In ancient India, the shape of altars used for public worship were combinations of

- a) circles, squares and rectangles b) triangles, circles and rectangles
 c) circles, trapeziums and squares d) rectangles, triangles and trapeziums
23. The number of interwoven isosceles triangles in *sriyantra* (in the *Atharvaveda*) is
 a) seven b) eight c) nine d) ten
24. In Indus Valley Civilisation, the bricks used for constructions were kiln fired and the ratio, length : breadth : thickness of the bricks was found to be
 a) 4 : 3 : 2 b) 4 : 4 : 1 c) 4 : 2 : 1 d) 1 : 2 : 3
25. Euclid divided his famous treatise "*The Elements*" into
 a) 9 chapters b) 11 chapters c) 12 chapters d) 13 chapters
26. Which of the following are known as the boundaries of solid ?
 a) curves b) lines c) points d) surfaces
27. The three steps from solids to points are
 a) Solids–surfaces–lines–points b) Solids–lines–surfaces–points
 c) Lines–points–surfaces–solids d) Lines–surfaces–points–solids
28. The number of dimensions, a solid has
 a) 0 b) 1 c) 2 d) 3
29. The number of dimensions, a surface has
 a) 1 b) 2 c) 3 d) 0
30. Axioms are assumed
 a) definitions
 b) theorems
 c) universal truths in all branches of mathematics.
 d) universal truths specific to geometry
31. Which of the following need a proof ?
 a) Axiom b) Theorem c) Definition d) Postulate
32. Euclid stated that if equals are subtracted from equals, the remainders are equal in the form of
 a) an axiom b) a postulate c) a definition d) a proof
33. Euclid stated that all right angles are equal to each other in the form of
 a) an axiom b) a definition c) a postulate d) a proof
34. 'Lines are parallel if they do not intersect' is stated in the form of
35. 'Lines are parallel if they do not intersect' is stated in the form of

- a) a definition b) an axiom c) a postulate d) a proof
36. X is of the same age as Y, Z is also of the same age as Y. Then the Euclid's axiom that illustrates the relative ages of X and Z is the
- a) first Axiom b) second Axiom c) third Axiom d) fourth Axiom