

**C.B.S.E. No. 1030429**

**WORKSHEET III– MATHEMATICS 2017-18**

**CLASS – VIII**

1. Define a) a rational number b) a whole number c) a natural number
2. Find $\frac{3}{8}$ + $\frac{4}{5}$ + $\frac{-1}{20}$ + $\frac{8}{25}$
3. Write 5 rational numbers between -5/ 12 & -7/ 15.
4. Represent -11 / 7, -15/7, 8/7, 23/7 on the number line.
5. Express in standard form: a) - 18/42 b) -32/ 100 c) 34/51 d) -26/91
6. Write -13/27 in a form so that the numerator is equal to a) 78 b) -65
7. What number should be added to $\frac{-15}{7}$ to get $\frac{5}{11}$ ?
8. Express 15/-26 as a rational number with denominator a) 104 b) 130
9. Arrange 2/5, 5/8, 4/7,3/11 in ascending order.
10. Find the smallest number by which 1152 must be multiplied so that the product becomes a perfect square.
11. Find the square root of each of the following: (by Division method) (i)12544 (ii)9653449 (iii)20421361
12. Find the smallest number by which 1152 must be divided so that it becomes a perfect square. Also, find the square root of the resulting number.
13. Find the Pythagorean triplet whose smallest member is 20.
14. Find the smallest square number that is divisible by each of the numbers 6, 15, and 27.
15. Find the least number that must be subtracted from 26535 so as to get a perfect square. Also, find the square root of the perfect square.
16. Find the cube roots of the following:
(i) 48228544/(-35937) (ii) -1728/17576
17. Three numbers are in the ratio of 2:3: 4. The sum of their cubes is 33957. Find the numbers.
18. Find the least number that must be added to 200 so as to get a perfect square. Also, find the square root of the perfect square.
19. Find the least number that must be multiplied with3600 so as to get a perfect cube. Also, find the cube root of the perfect cube.
20. What is the smallest number by which 8192 must be divided so that the quotient s a perfect cube?
21. Find the values of a) 811/2 b) 1252/3
22. Find the values of a) 1296-3/4 b) 343-2/3
23. Simplify a) 107/3÷ 104/3 b) 153/2÷ 151/2
24. By what number should $81^{\frac{3}{16}}$ be multiplied to get$3^{\frac{5}{4}}$ ?
25. Write the following numbers I the standard form :- a) 95640 b) 56 x 107 c) 43x 10 11 d) 879 x 10~~-4~~ e) 0.6578 f) 8888 x 10-8 g) 0.0000000056
26. Simplify:$a) \frac{ 25 × 3^{5} × 10^{5 }}{5^{7}× 6^{5}}$ b)$\frac{12^{4} ×9^{3} ×4}{6^{3} ×8^{2} ×27}$
27. Write down the properties of a square, rectangle, rhombus, kite, trapezium.
28. The measure of an angle of a parallelogram is 700, find the other angles.
29. Plot the following points using the same pair of axes and the same scale for each one: a) 0, -7 b) -6, 3 c) 4, 0 d) -8, 0 e) 0, 5 f) -2, -5 g) 4, -8 h) -2, 7 i) 1, 3
30. Write the following numbers in the usual form :- a) 14.93 x 107 b) 3.78 x 10 -5 c) 27.49 x 104
31. The angles of a quadrilateral are in the ratio of 2 : 3 : 5 : 8. Find the measure of each angle.
32. The 3 angles of a quadrilateral are 600, 750, 1250. Find the fourth angle.
33. In a parallelogram, ABCD, diagonals AC & BD intersect at O and AC = 15.6 cm& BD = 8.4 cm. Find the measures of OC & OD.
34. The perimeter of a parallelogram is 18 cm. One of its sides is greater than the other by 2cm. Find the lengths of all sides of the parallelogram.
35. The measure of an angle of a parallelogram is 600. What are the measures of the other angles?
36. ABCD is a rhombus with <ABC = 720. Find <CAD.
37. ABCD is a trapezium in which AB II CD. If < A= < B = 600, what are the measures of the other 2 angles?
38. The 3 angles of a quadrilateral are 500, 850, 1150. Find the fourth angle.
39. Find the measure of each exterior angle of a regular polygon of a) 8 sides b) 15 sides.
40. How many sides does a regular polygon have if each of its interior angle is of 1200.
41. What will be the sum of all the exterior angles of a decagon?
42. Draw the following figures & their nets: triangular prism, cube, cuboid, square pyramid, rectangular pyramid, triangular pyramid. Write down their number of faces, vertices, edges & derive Euler’s formula.
43. Solve the following: a) $\frac{x+5}{2}$ + $\frac{x-5}{3}$ = $\frac{25}{6}$ b) ( 5x -1 ) ( x + 3 ) = ( x – 5 ) ( 5 x + 1 ) + 40
44. The sum of 2 numbers is 45 & their ratio is 7: 8 . Find the numbers.
45. The sum of 2 numbers is 2490. If 6.5 % of one number is equal to 8.5% of the other, find the numbers.
46. The perimeter of a triangle measures 49 cm. One side is 7 cm longer than the other & 5 cm shorter than the third. Find the length of each side of the triangle.
47. The sum of the digits of a 2 digit number is 15.If the number formed by reversing the digits is less than the original number by 27, find the original number.
48. Draw the graphs for the following tables of values, with suitable scales on the axes.

a

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Time in hours | 1 | 1.5 | 2 | 3 |
| Distance in km | 50 | 75 | 100 | 150 |

b

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Number of mangoes | 2 | 3 | 7 | 8 |
| Cost in Rs. | 24 | 36 | 84 | 96 |