



Affiliated to CBSE – New Delhi

ANNUAL EXAMINATION, 2017-18

SUBJECT: MATHEMATICS

WORKSHEET-1

Class: VIII

Time: $1\frac{1}{2}$ Hour

1. Solve the equations:

(a) $7(2x-3) - 4(x+5) = 8(x-1) + 3$

(b) $12 - \frac{4}{5}(y+15) = 4$

2. Write a Pythagorean triplet whose smallest member is 25.

3. Factorize: (a) $x^2 + xy - xz - yz$

(b) $12xy + 16xy^2 + 20x^2y^2$

4. Find the square of the following numbers:

(a) 8,19,025

(b) 0.000676

(c) 0.289

5. Find the height of a cylinder whose radius is 14 cm and total surface area is 1936 cm^2 .

6. Train A travels 200 km in 2 hrs. If Train B also travels at the same speed as train A, what distance will it cover in 5 hrs.

7. A hostel has enough food to feed 1,500 students for 100 days. For how many days would the food last if 120 more students were to join the hostel.

8. Two physical quantities A and B vary directly, that is, $A = Kb$ with the constant of variation = 11. Find B if $A = 121$.

9. Plot the following points and find the area of the following figure.

$A(4,0)$, $B(8,0)$, $C(4,5)$, $D(8,5)$

10. Express 10.66×10^{-6} in the usual form.

11. A cube was cut through its centre into 2 equal pieces parallel to its base. The cube has a side of 8 cm. What new shapes are formed? Find the volume of each new shape.

12. Simplify the following.

$$(i) \quad (3^0 + 4^{-1}) \div 2^{-2}$$

$$(ii) \quad (3^{-1} + 4^{-1})^0 \times 5^{-1}$$

13. 16 identical cubes with edge 4 cm are joined to each other in a way that each row has 4 cubes. What will be the volume of the new 3-D shape formed?

14. Find the height of a cylinder with a surface area of 108π square metres. The radius of the cylinder is twice the height.

15. Find the diagonals of a rhombus if the length of one of its diagonals is double the other and its area is 186 cm^2 .

16. The area of a parallelogram is equal to the area of a rectangle with dimensions 40 cm by 12 cm. If the base of the parallelogram is 16 cm, find its height.

17. Simplify: $(x-1)(x-2)(x^2-9x+14) \div (x-7)(x^2-3x+2)$

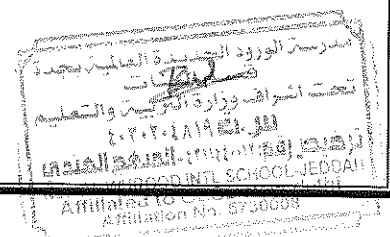
18. Find the smallest number by which 250 cm must be multiplied to get a perfect square. Also find the square root of the number obtained.

19. Construct a grouped frequency distribution table for the data on the time (in minutes) taken by Raj for his morning walk for 20 days. Make the groups with a class size of 5.

40, 38, 48, 60, 53, 31, 46, 34, 36, 49, 41, 55, 49, 65, 42, 44, 47, 38, 39. Also draw a histogram for the given data.

20. The sum of digits of a two digit number is 6. If 18 is added to this number, the number you get is formed by interchanging the digits of the original number. Find the number.

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