NISCORT FATHER AGNEL SCHOOL (2017-18)
SELF LEARNING WORKSHEET
CLASS-VIII
TOPIC - SQUARE AND SQUARE ROOTS

A. Find the square root of each of the following numbers by using the method of prime factorization:

1. 225 2.441 3.729 4.1296 5.2025 6.4096 7.7056

8.8100 9.9216 10.11025 11.15876 12.17424

B. Evaluate using long division method:

1. √56 2.√1444 3.√4489 4.√6241 5.√7056

6.√9O25 7.√11449 8.√14161 9.√10404 10.√7956

11.√19600 12. √92416

C. Evaluate the square root of the following numbers in decimal form:

1.√1.69 2.√33.64 3.√156.25 4.√75.69 5.√9.8596

6.√10.0486 7.√1.0816 8.√0.2916

D. Evaluate the square root of the following numbers in fraction form:

1. √16/81 2. √64/225 3. √121/256 4.√625/729

5. √98 /√162

1. Find the smallest number by which 1008 must be multiplied to get a perfect square. Also, find the square root of the perfect square so obtained.

2. 5929 students are sitting in an auditorium in such a manner that there are as many students in a row as there are rows in the auditorium. How many rows are there in the auditorium?

3. The cost of levelling and turfing a square lawn at Rs.2.50 per sq.m is Rs. 13,322.50.Find the cost of fencing it at Rs.5 per metre.

4. Find the smallest number by which 768 must be multiplied to get the perfect square number.

5. Find the least number which must be subtracted from 8105 to make it a perfect square.

6. Find the least number which must be subtracted from 7060 to obtain a perfect square.

7. Find the least number which must be added to 306455 to obtain a perfect square.

8. Find the least number which must be added to 8400 to obtain a perfect square. Find this perfect square and its square root.

9. Find the least number of four digits (4 digits) which is a perfect square. Also find the square root of the number so obtained.

10. Find the greatest number of five digits (5 digits) which is a perfect square. Also find the square root of the number so obtained.

11. Evaluate $\sqrt{3}$ up to two places of decimal.

12. Evaluate $\sqrt{2.8}$ correct up to two places of decimal.

13. Evaluate $\sqrt{0.9}$ correct up to two places of decimal.

14. The area of a square playground is 9998.0001 sq.m. Find the length of one side of the playground.

15. Find the least number exactly divisible by 8,9 and 10.

16. Find whether the following are pythagorean triplets-:

a)18,80,82

b) 14,48,51

c) 10,24,26

17. By which smallest number should we divide the following numbers to make them perfect square.

(i) 7938 (ii) 9075

Q.18. Find the square root of 0.0256.

19.Simplify-: $\frac{\sqrt{5626} + \sqrt{441}}{\sqrt{5626} - \sqrt{441}}$

20.Find the value of - $\sqrt{64432729} - \sqrt{9653449}$

NISCORT FATHER AGNEL SCHOOL (2017-18)
SELF LEARNING WORKSHEET
CLASS-VIII
TOPIC-CUBE AND CUBE ROOTS

1. Evaluate the cube of the following number:

(i) $(8)^3$

(ii) $(15)^3$

(iii) $(21)^3$

(iv) $(60)^3$

2. Evaluate the cube of the following decimal number:

(i) $(1.2)^3$

(ii) $(3.5)^3$

(iii) $(0.8)^3$

(iv) $(0.05)^3$

3. Evaluate the cube of the following fraction number:

(i) $(4/7)^3$

(ii) $(10/11)^3$

(iii) $(1/15)^3$

(iv) $(1(3/10))^3$

4. Choose from the following numbers that are perfect cubes.

(i) 125 (ii) 243 (iii) 343 (iv) 256 (v) 729

(vi) 1331 (vii) 8000 (viii) 9261 (ix) 5324 (x) 3375

5. Choose the following numbers that are the cubes of even numbers:

(i) 216 (ii) 729 (iii) 512 (iv) 3375 (v) 1000

6. Choose the following numbers that are the cubes of odd numbers:

(i) 125 (ii) 343 (iii) 1728 (iv) 4096 (v) 9261

7. Find the smallest number by which 11979 must be multiplied so that the product is a perfect cube.

8. Find the smallest number by which 8575 must be multiplied so that the product is a perfect cube.

9. What is the smallest number by which 108 must be divided so that the quotient is a perfect cube?

10. Find the smallest number by which 33275 must be divided so that the quotient is a perfect cube.

11. Evaluate: $\sqrt[3]{[(-1728)/2744]}$

12.The volume of a cube is 512 cubic metres. What is the side of the cube?

13.Find the cube root of:

a. 1 **b.** 8 **c.** 343 **d.**512 **e.** 64 **f.** 3375 **g.** 1728

h.26244 **i.**17576 **j**.5832000 **k**.125 x 3375

l.456533 **m.**74088 **n.**117649 **o.**2197

14. Evaluate $\sqrt[3]{4^3}$ **X** $\sqrt[3]{343}$

15. Evaluate $\sqrt[3]{8 \, X \, 17 \, X \, 17 \, X \, 17}$

16. Find the cube root of 32768 through estimation.

17. Evaluate $\sqrt[3]{700 \, x \, 2 \, x \, 49 \, x \, 5}$

18. Sheetal makes a cuboid of sides 5 cm, 2 cm and 5 cm. How many such cuboids will she need to form a cube?

19. The three numbers are in the ratio 2 : 3 : 4. The sum of their cubes is 33957. Find the numbers.

20. Find the cube root of $\frac{25 \times 27 \times 25 \times 8}{216 \times 5}$

FATHER AGNEL SCHOOL (2017-18)
SELF LEARNING WORKSHEET
CLASS-VIII
TOPIC-DIRECT AND INVERSE PROPORTION

1. Tick the correct alternative :

i. A car travels 108 km in 12 litres of petrol. In 10 litres of petrol, it will travel a distance of

a) 90 km **b) 518.4 km** **c) 100 km** **d) 25 km**

ii. If 4 men can complete a work in a week, how many men will complete the same work in two weeks?

a)2 **b) 4** **c) 8** **d) 14**

iii. Cost of notebooks is Rs 90 per dozen. Cost of 18 notebooks is

a) Rs 180 **b) Rs 120** **c) Rs 45** **d) Rs 135**

iv. 36 men can complete a piece of work in 20 days. In how many days will the work be done if the number of men is reduced to 12

a) 40 days **b) 6.6. days** **c) 60 days** **d) 8 days**

2. If one score oranges cost Rs. 45, how many oranges can be bought for Rs. 72?

3. If a car covers 82.5 km in 5.5 litres of petrol, how much distance will it cover in 13.2 litres of petrol?

4. If 35 men can reap a field in 8 days; in how many days can 20 men reap the same field?

5. A fort had provisions for 300 men for 90 days. After 20 days, 50 men left the fort. How long would the food last at the same rate?

6. If a man earns Rs.805 per week, in how many days he will earn Rs.1840?

7. 12 men can dig a pond in 8 days. How many men can dig it in 6 days?

8. A hostel has enough food for 125 students for 16 days. How long will the food last if 75 more students join them?

9. In a school, 9 periods of 40 minutes each are reserved in a week for Mathematics for class VIII. If the length of period is reduced to 30 minutes, then how many periods in a week will be reserved for Mathematics?

10. Reading 15 pages of a book every day, a girl can finish a book in 35 days. How many pages per day she must read if she wants to finish the book in 25 days

11. If 30 metres of cloth can be bought for Rs 810, how many metres of cloth can be bought for

Rs.1215?

12. 72 books are packed in 4 cartons of the same size. How many cartons are required for 360 books?

13. If 36 men can complete a work in 24 days, how many extra men be employed so as to complete the work in 18 days?

14. If a and b vary inversely, find the value of x:

a	**2**	**X**
b	**50**	**25**

15. A car can reach a certain place in 12 hours at the speed of 60 km/hr. By how much should the speed be increased so that it completes the journey in 10 hours?

16. In a library, 126 copies of a certain book require a shelf length of 3.78 m. How many copies of the same book would occupy shelf length of 4.8 m?

17. The simple interest on a certain sum is Rs.300 for 2 years. Find the simple interest on the same sum for 6 years at the same rate.

18. A map is drawn to a scale of 1cm:1000 km. If the distance on the map between two cities is 5cm, what is the actual distance between them?

19. Some spraying work can be done by 17 machines in 120 days. If the work is to be done in 102 days, how many more machines will be required?

20. 5 pipes are required to fill a petrol tank in 2 hours 20 minutes. How long will it take if only 4 pipes of the same type are used?

21. A train 350 m long is running at a speed of 42km/hr. How much time it will take to pass a man standing on a platform?

22. How long will a train ,120 m long, take to clear a platform ,130m long, if the speed of the train is 50km/hr?

23. A train 210 m long took 12 seconds to pass a 90 m long tunnel. Find the speed of the train.