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REVISION ASSIGNMENT (CLASS - VIII)
CHAPTER - 1. (RATIONAL NUMBERS)

Rearrange suitably and find sum.

i) $-5 + \frac{3}{10} + \frac{3}{7} + (-3) + \frac{5}{14} + \frac{1}{20}$ ii) $-\frac{3}{5} \times \frac{1}{4} + \frac{3}{7} \times -\frac{1}{5} + \frac{1}{6} \times \frac{1}{8}$

Represent on number line:-

i) $-3\frac{2}{5}$ ii) $-\frac{6}{7}$ iii) $5\frac{1}{3}$

Arrange the following rational numbers in ascending order:-

i) $\frac{2}{3}, \frac{5}{6}, -\frac{8}{3}, \frac{6}{-9}$ ii) $\frac{2}{3}, \frac{5}{6}, -\frac{1}{4}, -\frac{3}{5}$

Compute the following:-

i) $\frac{15}{2} + \frac{9}{8} + \frac{-11}{3} + 6 + \frac{-7}{6}$

ii) $\frac{2}{5} \times \left(\frac{9}{13} - \frac{7}{26} \right)$

Verify the properties and name the properties being used.

i) $-\frac{5}{11} \times \left(\frac{9}{13} \times \frac{-11}{15} \right) = \left(-\frac{5}{11} \times \frac{9}{13} \right) \times \frac{-11}{15}$

ii) $-\frac{1}{3} \times \left(-\frac{7}{8} - \frac{-11}{13} \right) = -\frac{1}{3} \times -\frac{7}{8} - \frac{-1}{3} \times \frac{-11}{13}$

Simplify:-

i) $\left| -\frac{7}{8} \div \frac{21}{32} \right|$

ii) $\frac{-\frac{13}{5} + \frac{12}{7}}{-\frac{31}{7} \times -\frac{1}{2}}$

Note: $\rightarrow |x|$ is absolute value.
After travelling a distance of 45 km, Aryan found that $\frac{3}{8}$ distance of his journey was still left. What was the length of his whole journey.

A floor is $2\frac{1}{4}$ m long & $1\frac{3}{4}$ m wide. A square carpet of side $1\frac{1}{2}$ m is laid on the floor. Find the area of the floor that is not carpeted.

Q-9. A train at a uniform speed covers a distance of 350 km in $3\frac{1}{2}$ hours. Find the speed of the train & the distance covered in 5 hours.

Q-10. Multiply the multiplicative inverse of $-1\frac{1}{8}$ with additive inverse of negative of $-\frac{8}{9}$.

Q-11. Find the total cost of 3 fountain pens and 3 ball pens, if the cost of one fountain pen is Rs. $65\frac{1}{3}$ and that of a ball pen is Rs. $31\frac{1}{6}$. (Use property) & name the property used.

Q-12. If $x = \frac{2}{3}$, $y = \frac{13}{21}$, $z = \frac{5}{7}$.

check that

i) $(x-y)-z \neq x-(y-z)$ [Associativity not true]
ii) $(x \div y) \div z \neq (x \div y) \div z$ [for subtraction/division.]
iii) $(x \div y)z \neq x \div (yz)$]

Q-13. Nine times the reciprocal of a rational number equals 6 times the reciprocal of 17. Find the rational number.

Q-14. Multiplicative inverse of $\frac{0}{1}$ is _____.

Q-15. Subtract $\sqrt{\frac{15625}{121}}$ from $\sqrt{\frac{625}{14641}}$.

Q-10. Find the sum of the following without actual addition:-

i) $1+3+5+7+9+\dots+53.$

ii) $1+3+5+7+9+\dots+31.$

Q-11. Find the square root using prime factorisation

i) 10404

ii) 10609

iii) 11025

Q-12. Find the greatest 5 digit perfect square number.

Q-13. Find i) $\sqrt{361 \times 1024}.$ iii) $\sqrt{45} \times \sqrt{20}$

ii) $\sqrt{25.6 \times 52.9}$

iv) $\sqrt{\frac{1183}{2023}}$

v) $\sqrt{\frac{0.4225}{0.0169}}$

vi) $\sqrt{3050} \times \sqrt{30}$

Q-14. What smallest number must be subtracted from 6156 to make it a perfect square.

Q-15. using $\sqrt{6241} = 79$, find -

i) $\sqrt{62.41}$

ii) $\sqrt{0.6241}$

iii) $\sqrt{0.006241}$

Q-16. For a special assembly, arrangement for 21027 students is to be done in such a way that the head boy and the head girl stand on the stage and the rest of the students form a square on the ground. Find the number of students in each row in this arrangement.

Q-17. The square area in front of Ravi's house is converted into a lawn. He spent Rs. 176400 at the rate of Rs. 25/sqm. What is the length of each side of lawn?

Q-18. 3600 square tiles are used on the floor of a square hall, to cover the hall completely. Each tile has an area of $0.025m^2$. What is the length of one side of the hall?

Squares and Square Roots

Q-1. Find the square root of the following numbers:-
(Use long division)

- i) 9126441 ii) 6.6049 iii) 39526369 iv) 1004.89
v) 7208.01 vi) 158.76 vii) 7728400 viii) 100.0625.

Q-2. Find the square root:-

i) $\sqrt{10 \frac{151}{225}}$

ii) $\sqrt{2 \frac{137}{196}}$

iii) $\sqrt{\frac{27225}{1024}}$

iv) 640.09

Q-3. Which factor will turn 2187 into a perfect square?

Q-4. Find the least perfect square exactly divisible by each one of the numbers 6, 9, 10, 15 & 20.

Q-5. The area of a square ground is 60025 m^2 . A man cycles along its boundary at 18 km/h . In how much time will he return to the starting point?

Q-6. Find the least number of 8 digits which is a perfect square.

Q-7. Find the least number which must be added to 6203 to make it a perfect square. Find the square root of the perfect square so obtained.

Q-8. A farmer grows plants in rows to form a perfect square. In doing so, 45 plants are left out. If the total number of plants be 1809, find the number of plants in each row.

Q-9. Find the square root of $\sqrt{441}$ to three places of decimal.

Cube and Cube Root

Q-1) Which of the following numbers are perfect cubes?

- i) 42875 ii) 74078 iii) 85189 iv) 1729

Q-2) Find -

- i) $\sqrt[3]{343 \times 64}$ ii) $\sqrt[3]{\frac{729}{1000}}$ iii) $\sqrt[3]{\frac{864}{1372}}$

Q-3) Find the smallest number by which 7680 be multiplied so that the product becomes a perfect cube.

Q-4) Find the side of a cube whose volume is 1953.125 m^3 .

Q-5) Find the smallest no. by which 88209 be divided so that the quotient is a perfect cube.

Q-6) The sum of the cubes of three numbers which are in the ratio 1:2:3 is 7776. Find the numbers.

Q-7) Find $\sqrt[3]{-a^3} \times \sqrt[3]{-b^3}$

Q-8) Fill in the blanks:-

i) Numbers ending with the digits 2, 3, 7 or 8 are not perfect squares/perfect cubes.

ii) Square root of an odd number is an _____ number.

Q-9) Three numbers are in the ratio 1:2:3. The sum of their cubes is 62208. Find the numbers.

Q-10.

Find i) $\sqrt[3]{2.197 \times 1.331}$

iii) $\sqrt[3]{49} \times \sqrt[3]{7}$

ii) $\sqrt[3]{121} \times \sqrt[3]{11}$

iv) $\sqrt[3]{0.625} \times \sqrt[3]{0.025}$

Q-11.

Volume of a cubical box is 32.768 cubic cm. What is the length of a side of a box?

Q-12.

Find the cube root of square root of 1771561.

Introduction to graphs.

Q-1.

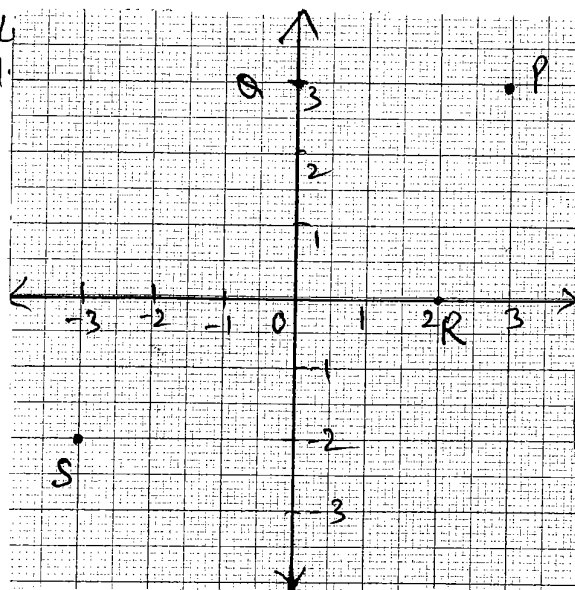
Read the graph to answer the following questions:-

a) Write the coordinates of point P.

b) Write abscissa of point Q.

c) Write ordinate of point R.

d) Where does point S lie?
(in which quad.)



Q-2.

Write in ordered pair:-

a) abscissa = 4, ordinate = -6

b) abscissa = -2, ordinate = 0

Q-3.

Draw a pentagon with the following coordinates:-

A(1,1), B(1,4), C(4,7), D(5,3) & E(3,1).

Q-4.

Draw a $\triangle ABC$, A(-4,0), B(0,4) & C(2,-2). Write the quadrants in which above pts. lie.