Class VIII

Maths Test 1:

(Rational Numbers, Squares And Cube Roots & Exponents)

Duration: 1.45 hrs **TotalMks: 70**

1. Find any 5 rational nos between $\frac{-5}{6}$ & $\frac{5}{6}$ 2.5
2. Find the multiplicative inverse of : -13, 13, 13^{-1} 1.5
3. Find cube root of $3^3 \times 3^3 \times 2^2 \times 2^7$. 1
4. Without adding, find the sum. 1
   1 + 3 + 5 + 7 + 9 + l1 + 13 + 15 + 17
5. Evaluate 8
   a. $\left[\left(\frac{1}{3}\right)^{-1} - \left(\frac{1}{4}\right)^{-1}\right]^{-1}$
   b. $(3^{-5} \times 10^{-5} \times 125) \div (5^{-7} \times 6^{-5})$
   c. $(2^{-1} \times 4^{-1}) \div 2^{-2}$
   d. $\frac{3^{-5} * 10^{-5} * 125}{5^{-7} * 6^{-5}}$
6. Find value of p if : $\left(\frac{7}{3}\right)^{2p+4} \div \left(\frac{7}{3}\right)^{5} = \left(\frac{7}{3}\right)^{p+2}$ 2
7. Evaluate the following: 4
   a. $\sqrt[3]{\frac{0.027}{0.008}} \div \sqrt[2]{\frac{0.09}{0.04}} - 1$
   b. $\sqrt[3]{0.125} + \sqrt[3]{\frac{1}{0.008}} - \sqrt[3]{0.1 * 0.1 * 0.1 * 1.3 * 1.3 * 1.3}$
8. Evaluate: 2
   a. $\frac{3}{7} + \left(-\frac{6}{11}\right) + \left(-\frac{8}{21}\right) + \frac{5}{22}$
9. Plot the following on numberline: 4
   a. $-3\frac{4}{5}$
   b. $\frac{5}{7}$

10. Find multiplicative and additive inverse of 2

a. $-\frac{4}{5}$

b. -0

11. Find the value of $125\sqrt[3]{a^6} - \sqrt[3]{125a^6}$ when a = 2. 2

12. If $(2744)^{1/3}$ = 2p +2 then find the value of p. 2

13. Evaluate $[\{24^2 + 7^2\}^{1/2}]^3$. 2

14. Arrange the following numbers in ascending order: 2

4 /– 9 ; – 5 /12 ; 7/ – 18 ; – 2/ 3

15. After reading 7/9 of a book, 40 pages are left. How many pages are there in the book? 2

16. What is the quotient when a non-zero rational number is divided by its additive inverse? 2

17. Verify that $(x \times y)^{-1} = x^{-1} \times y^{-1}$ 2

When x = 2/3 and y = 3/5

18. Find the greatest 4-digit number which is a perfect square. 3

19. Find the smallest square number that is divisible by each of the numbers 8, 15 and 20. 3

20. If you subtract 1/2 from a number and multiply the result by 1/2, you get 1/8. What is the number? 3

21. If $x^3 = \frac{729}{2197}$ and $y^3 = \frac{9261}{42875}$, then find x + y. 3

22. Salma bought $2\frac{1}{2}$kg onions at Rs. 12 per Kg. and $1\frac{3}{8}$ Kg. tomatoes at Rs. $16\frac{8}{11}$ per Kg. How much money did she give to the shopkeeper? 3

23. Divide the difference of 12/7 and 13/4 by the product of 4/5 and 25/2 3

24. If x = 2/3, y = 4/5, z = ¾, 5

show that x ÷ (y + z) = (x ÷ y) + (x ÷ z)

25. Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3, and 4 respectively, they add up to 74. Find these numbers. 5