

## INSTRUCTIONS:

- Do your work in your school register.
- Write neatly and legibly.
- Write and memorize squares and cubes from 01 to 30.
- Solve the given assignment.

Assignment - 1 Date 36

Class : IX

1. Without dividing state whether the following rational numbers are terminating or non terminating repeating.

(i)  $\frac{13}{50}$       (ii)  $\frac{280}{370}$       (iii)  $\frac{53}{8}$

2. Find four rational numbers b/w  $\frac{2}{5}$  and  $\frac{4}{15}$

3. Find four irrational numbers b/w  $\frac{7}{8}$  and  $\frac{13}{25}$

4. Give four examples of irrational numbers

5. Simplify :

(i)  $(36)^{-1/2}$       (ii)  $(32)^{-3/5}$       (iii)  $(64)^{2/3}$   
 (iv)  $(13^5 \times 13^3)^{10}$       (v)  $[\frac{1}{2}]^3 \times [\frac{7}{3}]^3$

6. Simplify :

(i)  $\frac{1}{\sqrt{7}-\sqrt{4}}$       (ii)  $\frac{(\sqrt{3}-\sqrt{5})(\sqrt{5}+\sqrt{3})}{7-2\sqrt{5}}$   
 (iii)  $\frac{2\sqrt{6} + 6\sqrt{2}}{\sqrt{2}+\sqrt{3}} - \frac{8\sqrt{3}}{\sqrt{6}+\sqrt{2}}$

7. Find a and b, if  $\frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{\sqrt{7}+1}{\sqrt{7}-1} = a+b\sqrt{7}$

8. Represent on no line  
 (i)  $\sqrt{3}$       (ii)  $\sqrt{5}$       (iii)  $\sqrt{17}$

9. Divide :  $5\sqrt{45}$  by  $\frac{\sqrt{75}}{\sqrt{3}}$

10. If  $a = \frac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + 2}$  and  $b = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$  find the value of  $a^2 + b - 5ab$

11. Divide the polynomial  $3x^4 + 5x^3 - 7x^2 + 2x + 3$  by  $x^2 + 3x + 1$  and write quotient and remainder.

12. Expand using identities

(i)  $(\sqrt{2}x + 5y - 6z)^2$

(ii)  $(7x + 2y)^3$

(iii)  $(x - 5y)^3$

13. Factorize:

(i)  $4x^2 + 9y^2 + z^2 - 12xy - 6yz + 4xz$

(ii)  $x^2 - 25$

(iii)  $343x^3 - 64y^3$

(iv)  $3x^2 - 2x - 1$

14. Find the value of the following using identities

(i)  $105^3$

(ii)  $99^3$

(iii)  $38^3 - 25^3 - 13^3$

- Revise chapter 1 & chapter 2 along with all examples.
- See this video to clear the concepts of polynomials:  
<https://youtu.be/wGs8Bk11Wto>

- Make a PPT on Chapter 1 – Number System (viz. Real numbers, whole numbers, integers, etc.)

#### IMPORTANT

- Revise the work done till date. Prepare for Periodic Test.