

Summer Vacation  
(03.05.17 to 21.06.17)  
Home Work

PRACTICE QUESTIONS  
CLASS IX : CHAPTER - 1  
NUMBER SYSTEM

1. Find six rational numbers between 3 and 4.
  2. Find five rational numbers between  $\frac{3}{5}$  and  $\frac{4}{5}$
  3. Represent the real number  $\sqrt{10}$  on the number line.
  4. Represent the real number  $\sqrt{13}$  on the number line.
  5. Represent the real number  $\sqrt{7}$  on the number line.
  6. Represent the real number  $\sqrt{2}, \sqrt{3}, \sqrt{5}$  on a single number line.
  7. Find two rational number and two irrational number between  $\sqrt{2}$  and  $\sqrt{3}$ .
  8. Find the decimal expansions of  $\frac{10}{3}, \frac{7}{8}$  and  $\frac{1}{7}$ .
  9. Show that 3.142678 is a rational number. In other words, express 3.142678 in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
  10. Show that 0.3333..... can be expressed in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
  11. Show that 1.27272727..... can be expressed in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
  12. Show that 0.23535353..... can be expressed in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
  13. Express the following in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .  
(i)  $0.\overline{6}$       (ii)  $0.4\overline{7}$       (iii)  $0.\overline{001}$       (iv)  $0.2\overline{6}$
  14. Find three different irrational numbers between the rational numbers  $\frac{5}{7}$  and  $\frac{9}{11}$ .
  15. Visualize the representation of  $5.3\overline{7}$  using successive magnification
  16. Visualize  $4.\overline{26}$  on the number line, using successive magnification upto 4 decimal places.
  17. Visualize 3.765 on the number line, using successive magnification.
  18. Express  $0.6 + 0.\overline{7} + 0.4\overline{7}$  in the form of  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
- .....

## PRACTICE QUESTIONS

### CLASS VIII (REVISION)

#### FACTORISATION

- Factorize  $12a^2b + 15ab^2$
- Factorize  $10x^2 - 18x^3 + 14x^4$
- Factorize: (i)  $12x + 36$  (ii)  $22y - 33z$  (iii)  $14pq + 35pqr$
- Factorize  $6xy - 4y + 6 - 9x$ .
- Factorize  $x^2 + 8x + 16$
- Factorize  $4y^2 - 12y + 9$
- Factorize  $49p^2 - 36$
- Factorize  $a^2 - 2ab + b^2 - c^2$
- Factorize  $m^4 - 256$
- Factorize  $x^2 + 5x + 6$
- Find the factors of  $y^2 - 7y + 12$ .
- Obtain the factors of  $z^2 - 4z - 12$ .
- Find the factors of  $3m^2 + 9m + 6$ .
- Do the following divisions. (i)  $-20x^4 \div 10x^2$  (ii)  $7x^2y^2z^2 \div 14xyz$
- Divide  $24(x^2yz + xy^2z + xyz^2)$  by  $8xyz$
- Divide  $44(x^4 - 5x^3 - 24x^2)$  by  $11x(x - 8)$
- Divide  $z(5z^2 - 80)$  by  $5z(z + 4)$
- Factorize the expressions and divide them as directed.
  - $(y^2 + 7y + 10) \div (y + 5)$
  - $(m^2 - 14m - 32) \div (m + 2)$
  - $(5p^2 - 25p + 20) \div (p - 1)$
  - $4yz(z^2 + 6z - 16) \div 2y(z + 8)$
  - $12xy(9x^2 - 16y^2) \div 4xy(3x + 4y)$
  - $39y^3(50y^2 - 98) \div 26y^2(5y + 7)$
- Divide as directed.
  - $5(2x + 1)(3x + 5) \div (2x + 1)$
  - $26xy(x + 5)(y - 4) \div 13x(y - 4)$
  - $52pqr(p + q)(q + r)(r + p) \div 104pq(q + r)(r + p)$
  - $20(y + 4)(y^2 + 5y + 3) \div 5(y + 4)$
  - $x(x + 1)(x + 2)(x + 3) \div x(x + 1)$



20. Factorize the following expressions:

1.  $9x^2 + 12xy$
2.  $18x^2y - 24xyz$
3.  $27a^3b^3 - 45a^4b^2$
4.  $2a(x + y) - 3b(x + y)$
5.  $2x(p^2 + q^2) + 4y(p^2 + q^2)$
6.  $x(a - 5) + y(5 - a)$
7.  $4(a + b) - 6(a + b)^2$
8.  $8(3a - 2b)^2 - 10(3a - 2b)$
9.  $x(x + y)^3 - 3x^2y(x + y)$
10.  $x^3 + 2x^2 + 5x + 10$
11.  $x^2 + xy - 2xz - 2yz$
12.  $a^3b - a^2b + 5ab - 5b$
13.  $8 - 4a - 2a^3 + a^4$
14.  $x^3 - 2x^2y + 3xy^2 - 6y^3$
15.  $px - 5q + pq - 5x$
16.  $x^2 + y - xy - x$
17.  $(3a - 1)^2 - 6a + 2$
18.  $(2x - 3)^2 - 8x + 12$
19.  $a^3 + a - 3a^2 - 3$
20.  $3ax - 6ay - 8by + 4bx$
21.  $abx^2 + a^2x + b^2x + ab$
22.  $x^3 - x^2 + ax + x - a - 1$
23.  $2x + 4y - 8xy - 1$
24.  $ab(x^2 + y^2) - xy(a^2 + b^2)$
25.  $a^2 + ab(b + 1) + b^3$

Asisunnam

B. Govindarao  
01/05/17  
(B. Govindarao)  
TGT(Mathematics)