



**PRACTICE PAPER 01**  
**CHAPTER 01 NUMBER SYSTEM**

**SUBJECT: MATHEMATICS**

**MAX. MARKS : 40**

**CLASS : IX**

**DURATION : 1½ hrs**

**General Instructions:**

- (i). All questions are compulsory.
- (ii). This question paper contains 20 questions divided into five Sections A, B, C, D and E.
- (iii). **Section A** comprises of 10 MCQs of 1 mark each. **Section B** comprises of 4 questions of 2 marks each. **Section C** comprises of 3 questions of 3 marks each. **Section D** comprises of 1 question of 5 marks each and **Section E** comprises of 2 Case Study Based Questions of 4 marks each.
- (iv). There is no overall choice.
- (v). Use of Calculators is not permitted

**SECTION – A**

Questions 1 to 10 carry 1 mark each.

1. On simplifying  $(\sqrt{3} - \sqrt{7})^2$ , we get  
(a)  $2 - \sqrt{21}$                       (b)  $5 - \sqrt{21}$                       (c)  $2(5 - \sqrt{21})$                       (d)  $10 - \sqrt{21}$
2. The value of  $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$  is equal to  
(a)  $\sqrt{2}$                       (b) 2                      (c) 4                      (d) 8
3. The simplified form of  $13^5 \div 13^3$  is  
(a)  $13^{\frac{2}{15}}$                       (b)  $13^{\frac{8}{15}}$                       (c)  $13^{\frac{-1}{15}}$                       (d)  $13^{\frac{-2}{15}}$
4. On dividing  $6\sqrt{27}$  by  $2\sqrt{3}$ , we get  
(a)  $3\sqrt{9}$                       (b) 6                      (c) 9                      (d) none of these
5. The value of  $\sqrt{10}$  times  $\sqrt{15}$  is equal to  
(a)  $5\sqrt{6}$                       (b)  $\sqrt{25}$                       (c)  $10\sqrt{5}$                       (d)  $\sqrt{5}$
6. Value of  $(256)^{0.16} \times (256)^{0.09}$  is  
(a) 4                      (b) 16                      (c) 64                      (d) 256.25
7.  $\left(-\frac{1}{27}\right)^{\frac{-2}{3}}$  is equal to  
(a)  $8\left(\frac{1}{27}\right)^{\frac{-2}{3}}$                       (b) 9                      (c)  $\frac{1}{9}$                       (d)  $27\sqrt{27}$
8. Value of  $\sqrt[4]{(81)^{-2}}$  is  
(a)  $\frac{1}{9}$                       (b)  $\frac{1}{3}$                       (c) 9                      (d)  $\frac{1}{81}$

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.



- (a) Both A and R are true and R is the correct explanation of A.  
 (b) Both A and R are true but R is not the correct explanation of A.  
 (c) A is true but R is false.  
 (d) A is false but R is true.

9. **Assertion (A):** Rational number lying between two rational numbers  $x$  and  $y$  is  $\frac{1}{2}(x + y)$ .

**Reason (R):** There is one rational number lying between any two rational numbers.

10. **Assertion (A):**  $2 + \sqrt{3}$  is an irrational number.

**Reason (R):** Sum of a rational number and an irrational numbers is always an irrational number.

### SECTION – B

Questions 11 to 14 carry 2 marks each.

11. Find the value of  $x$  for which  $\left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 = \left(\frac{4}{3}\right)^{x+2}$ .

12. Simplify  $\sqrt[4]{81} - 8(\sqrt[3]{216}) + 15(\sqrt[5]{32}) + \sqrt{225}$ .

13. Simplify  $\frac{6-4\sqrt{3}}{6+4\sqrt{3}}$  by rationalising the denominator.

14. Represent  $\sqrt{2}$  on the real number line.

### SECTION – C

Questions 15 to 17 carry 3 marks each.

15. Find the value of  $\frac{4}{(216)^{\frac{2}{3}}} + \frac{1}{(256)^{\frac{3}{4}}} + \frac{2}{(243)^{\frac{1}{5}}}$

16. Find the value of  $a$  and  $b$ , if  $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$

17. Simplify  $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$  by using rationalizing the denominator

### SECTION – D

Questions 18 carry 5 marks each.

18. Prove that  $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$ .

### SECTION – E (Case Study Based Questions)

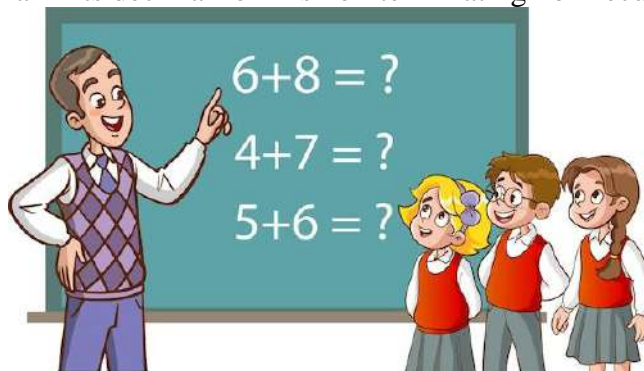
Questions 19 to 20 carry 4 marks each.

19. Mr. Kumar, a Mathematics teacher explained some key points of unit 1 of class IX to his students. Some are given here.

- There are infinite rational numbers between any two rational numbers.



- Rationalisation of a denominator means to change the irrational denominator to rational form.
- A number is irrational if its decimal form is non-terminating non-recurring



On the basis of these key points, Answer the following questions

- What is the reciprocal of  $2 + \sqrt{3}$  ?
- Find a rational number between  $\sqrt{2}$  and  $\sqrt{3}$
- Simplify  $(\sqrt{3} - \sqrt{7})^3$

OR

- Express  $\frac{4}{7}$  in decimal form and state the kind of decimal expansion.

- 20.** In January 2021, the vaccination drive for COVID -19 started in 7 states of a country. More than 60% of the people were vaccinated in 4 states out of 7 states, In one of the state vaccination drive has not been started due to flood although vaccine dose was supplied to that state in advance. In February 2021, 4 more states were included in this drive and 2 states have got remarkable response from the people and more than 80% of the population got vaccinated there. Using this information answer the following questions:



- In January 2021, more than 60% of people were vaccinated in 4 states out of 7 states. Find the decimal representation of  $\frac{4}{7}$  (2)

- In 2 states out of 11 states, more than 80% of people participated in vaccination drive in two months. Find the decimal form of  $\frac{2}{11}$  (2)

OR

- The fraction for state where vaccination not started in January 2021 is  $\frac{1}{7}$  and its decimal form is  $0.\overline{142857}$ . Find the decimal form of  $\frac{6}{7}$ . (2)





**PRACTICE PAPER 01**  
**CHAPTER 01 NUMBER SYSTEM**  
**(ANSWERS)**

**SUBJECT: MATHEMATICS**  
**CLASS : IX**

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**SECTION – A**

Questions 1 to 10 carry 1 mark each.

1. On simplifying  $(\sqrt{3} - \sqrt{7})^2$ , we get

- (a)  $2 - \sqrt{21}$                       (b)  $5 - \sqrt{21}$                       (c)  $2(5 - \sqrt{21})$                       (d)  $10 - \sqrt{21}$

Ans: (c)  $2(5 - \sqrt{21})$

$$\begin{aligned}(\sqrt{3} - \sqrt{7})^2 &= (\sqrt{3})^2 + (\sqrt{7})^2 - 2 \times \sqrt{3} \times \sqrt{7} \\ &= 3 + 7 - 2\sqrt{21} = 10 - 2\sqrt{21} = 2(5 - \sqrt{21})\end{aligned}$$

2. The value of  $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$  is equal to

- (a)  $\sqrt{2}$                       (b) 2                      (c) 4                      (d) 8

Ans: (b) 2

$$\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}} = \frac{4\sqrt{2} + 4\sqrt{3}}{2\sqrt{2} + 2\sqrt{3}} = \frac{4(\sqrt{2} + \sqrt{3})}{2(\sqrt{2} + \sqrt{3})} = \frac{4}{2} = 2$$

∴ Correct option is (b).

3. The simplified form of  $13^{\frac{1}{5}} \div 13^{\frac{1}{3}}$  is

- (a)  $13^{\frac{2}{15}}$                       (b)  $13^{\frac{8}{15}}$                       (c)  $13^{\frac{-1}{15}}$                       (d)  $13^{\frac{-2}{15}}$

Ans: (d)  $13^{\frac{-2}{15}}$

$$\frac{13^{\frac{1}{5}}}{13^{\frac{1}{3}}} = 13^{\frac{1}{5} - \frac{1}{3}} = 13^{\frac{3}{15} - \frac{5}{15}} = 13^{-\frac{2}{15}}$$

∴ Correct option is (d).

4. On dividing  $6\sqrt{27}$  by  $2\sqrt{3}$ , we get

- (a)  $3\sqrt{9}$                       (b) 6                      (c) 9                      (d) none of these

Ans: (c) 9

$$\frac{6\sqrt{27}}{2\sqrt{3}} = \frac{3 \times 3\sqrt{3}}{\sqrt{3}} = 9$$

5. The value of  $\sqrt{10}$  times  $\sqrt{15}$  is equal to



- (a)  $5\sqrt{6}$                       (b)  $\sqrt{25}$                       (c)  $10\sqrt{5}$                       (d)  $\sqrt{5}$

Ans: (a)  $5\sqrt{6}$

$$\sqrt{10} \times \sqrt{15} = (\sqrt{2} \cdot \sqrt{5}) \times (\sqrt{3} \cdot \sqrt{5}) = (\sqrt{5} \times \sqrt{5}) (\sqrt{2} \times \sqrt{3}) = 5\sqrt{6}.$$

6. Value of  $(256)^{0.16} \times (256)^{0.09}$  is

- (a) 4                      (b) 16                      (c) 64                      (d) 256.25

Ans: (a) 4

$$\begin{aligned} (256)^{0.16} \times (256)^{0.09} &= (256)^{0.16 + 0.09} = (256)^{0.25} \\ &= (256)^{\frac{25}{100}} = (4^4)^{\frac{1}{4}} \\ &= 4^{4 \times \frac{1}{4}} = 4 \end{aligned}$$

∴ Correct option is (a).

7.  $\left(-\frac{1}{27}\right)^{-\frac{2}{3}}$  is equal to

- (a)  $8\left(\frac{1}{27}\right)^{\frac{2}{3}}$                       (b) 9                      (c)  $\frac{1}{9}$                       (d)  $27\sqrt{27}$

Ans: (b) 9

$$\begin{aligned} \left(\frac{-1}{27}\right)^{-\frac{2}{3}} &= \left(\frac{-1}{3^3}\right)^{-\frac{2}{3}} = (-1)^{-\frac{2}{3}} \times (3^{-3})^{-\frac{2}{3}} \\ &= \{(-1)^2\}^{\frac{1}{3}} \times 3^2 = 1 \times 9 = 9 \end{aligned}$$

∴ Correct option is (b).

8. Value of  $\sqrt[4]{(81)^{-2}}$  is

- (a)  $\frac{1}{9}$                       (b)  $\frac{1}{3}$                       (c) 9                      (d)  $\frac{1}{81}$

Ans: (a)  $\frac{1}{9}$

$$\sqrt[4]{(81)^{-2}} = [(9^2)^{-2}]^{\frac{1}{4}} = 9^{-2 \times 2 \times \frac{1}{4}} = 9^{-1} = \frac{1}{9}$$

**In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.**

- (a) Both A and R are true and R is the correct explanation of A.  
 (b) Both A and R are true but R is not the correct explanation of A.  
 (c) A is true but R is false.  
 (d) A is false but R is true.

9. **Assertion (A):** Rational number lying between two rational numbers  $x$  and  $y$  is  $\frac{1}{2}(x + y)$ .

**Reason (R):** There is one rational number lying between any two rational numbers.

Ans: (c) Assertion (A) is true but reason (R) is false.

10. **Assertion (A):**  $2 + \sqrt{3}$  is an irrational number.

**Reason (R):** Sum of a rational number and an irrational numbers is always an irrational number.

Ans: (a) Both A and R are true and R is the correct explanation of A.

## SECTION – B

Questions 11 to 14 carry 2 marks each.

11. Find the value of x for which  $\left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 = \left(\frac{4}{3}\right)^{x+2}$ .

Ans:

$$\begin{aligned}\text{Given } \left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 &= \left(\frac{4}{3}\right)^{x+2} \\ \Rightarrow \left(\frac{4}{3}\right)^{-6} \times \left[\left(\frac{4}{3}\right)^2\right]^5 &= \left(\frac{4}{3}\right)^{x+2} \\ \Rightarrow \left(\frac{4}{3}\right)^{-6} \times \left(\frac{4}{3}\right)^{10} &= \left(\frac{4}{3}\right)^{x+2} \\ \Rightarrow \left(\frac{4}{3}\right)^{10-6} &= \left(\frac{4}{3}\right)^{x+2} \\ \Rightarrow \left(\frac{4}{3}\right)^4 &= \left(\frac{4}{3}\right)^{x+2} \Rightarrow 4 = x + 2 \Rightarrow x = 2\end{aligned}$$

12. Simplify  $\sqrt[4]{81} - 8(\sqrt[3]{216}) + 15(\sqrt[5]{32}) + \sqrt{225}$ .

Ans:

$$\begin{aligned}\sqrt[4]{81} &= (81)^{\frac{1}{4}} = (3^4)^{\frac{1}{4}} = 3^{4 \times \frac{1}{4}} = 3 \\ \sqrt[3]{216} &= (216)^{\frac{1}{3}} = (6^3)^{\frac{1}{3}} = 6^{3 \times \frac{1}{3}} = 6 \\ \sqrt[5]{32} &= (32)^{\frac{1}{5}} = (2^5)^{\frac{1}{5}} = 2^{5 \times \frac{1}{5}} = 2 \\ \sqrt{225} &= (225)^{\frac{1}{2}} = (15^2)^{\frac{1}{2}} = 15^{2 \times \frac{1}{2}} = 15 \\ \text{Hence, } \sqrt[4]{81} - 8(\sqrt[3]{216}) + 15(\sqrt[5]{32}) + \sqrt{225} \\ &= 3 - 8 \times 6 + 15 \times 2 + 15 = 3 - 48 + 30 + 15 = 48 - 48 = 0\end{aligned}$$

13. Simplify  $\frac{6-4\sqrt{3}}{6+4\sqrt{3}}$  by rationalising the denominator.

Ans:

$$\begin{aligned}\frac{6-4\sqrt{3}}{6+4\sqrt{3}} &= \frac{(6-4\sqrt{3})}{(6+4\sqrt{3})} \times \frac{(6-4\sqrt{3})}{(6-4\sqrt{3})} = \frac{(6-4\sqrt{3})^2}{(6)^2 - (4\sqrt{3})^2} \\ &= \frac{36 - 48\sqrt{3} + 48}{36 - 48} \quad [(a-b)^2 = a^2 - 2ab + b^2] \\ &= \frac{84 - 48\sqrt{3}}{-12} = \frac{12(7-4\sqrt{3})}{-12} = 4\sqrt{3} - 7\end{aligned}$$

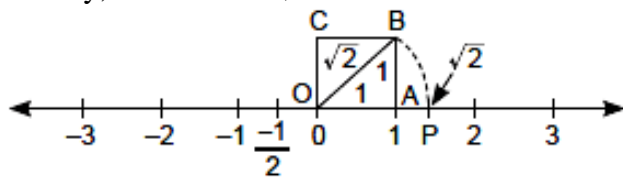
14. Represent  $\sqrt{2}$  on the real number line.

Ans: Using Pythagoras theorem,  $\sqrt{2} = \sqrt{1^2 + 1^2}$   
 $\Rightarrow OB = \sqrt{OA^2 + AB^2} = \sqrt{2}$

Hence, take OA = 1 unit on the number line and AB = 1 unit, which is perpendicular to OA. With O as centre and OB as radius, we draw an arc to intersect the number line at P. Then P corresponds to  $\sqrt{2}$  on the number line as shown in figure.



Clearly,  $OP = OB = \sqrt{2}$



### SECTION – C

Questions 15 to 17 carry 3 marks each.

15. Find the value of  $\frac{4}{(216)^{-\frac{2}{3}}} + \frac{1}{(256)^{-\frac{3}{4}}} + \frac{2}{(243)^{-\frac{1}{5}}}$

Ans:

$$\begin{aligned} \frac{4}{(216)^{-\frac{2}{3}}} + \frac{1}{(256)^{-\frac{3}{4}}} + \frac{2}{(243)^{-\frac{1}{5}}} &= \frac{4}{(6^3)^{-\frac{2}{3}}} + \frac{1}{(2^8)^{-\frac{3}{4}}} + \frac{2}{(3^5)^{-\frac{1}{5}}} \\ &= \frac{4}{6^{-3 \times \frac{2}{3}}} + \frac{1}{2^{-8 \times \frac{3}{4}}} + \frac{2}{3^{-5 \times \frac{1}{5}}} = \frac{4}{6^{-2}} + \frac{1}{2^{-6}} + \frac{2}{3^{-1}} \\ &= 4 \times 6^2 + 2^6 + 2 \times 3 = 4 \times 36 + 64 + 6 \\ &= 144 + 70 = 214 \end{aligned}$$

16. Find the value of  $a$  and  $b$ , if  $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$

Ans:

$$\begin{aligned} \frac{\sqrt{3}-1}{\sqrt{3}+1} &= \left(\frac{\sqrt{3}-1}{\sqrt{3}+1}\right) \times \left(\frac{\sqrt{3}-1}{\sqrt{3}-1}\right) \\ &= \frac{(\sqrt{3}-1)^2}{(\sqrt{3})^2 - 1^2} = \frac{3+1-2\sqrt{3}}{3-1} = \frac{4-2\sqrt{3}}{2} = \frac{2(2-\sqrt{3})}{2} = 2-\sqrt{3} \\ &\Rightarrow 2-\sqrt{3} = a + b\sqrt{3} \end{aligned}$$

Hence, on equating rational and irrational part both sides, we get  $a = 2, b = -1$ .

17. Simplify  $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$  by using rationalizing the denominator

Ans:

$$\begin{aligned} \frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}} &= \left(\frac{4+\sqrt{5}}{4-\sqrt{5}}\right) \times \left(\frac{4+\sqrt{5}}{4+\sqrt{5}}\right) + \left(\frac{4-\sqrt{5}}{4+\sqrt{5}}\right) \times \left(\frac{4-\sqrt{5}}{4-\sqrt{5}}\right) \\ &\quad \text{(Rationalising both denominators)} \\ &= \frac{(4+\sqrt{5})^2}{(4)^2 - (\sqrt{5})^2} + \frac{(4-\sqrt{5})^2}{(4)^2 - (\sqrt{5})^2} = \frac{16+5+8\sqrt{5}}{16-5} + \frac{16+5-8\sqrt{5}}{16-5} \\ &= \frac{1}{11} [21+8\sqrt{5} + 21-8\sqrt{5}] = \frac{42}{11} \end{aligned}$$

### SECTION – D

Questions 18 carry 5 marks each.

18. Prove that  $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$ .

Ans:

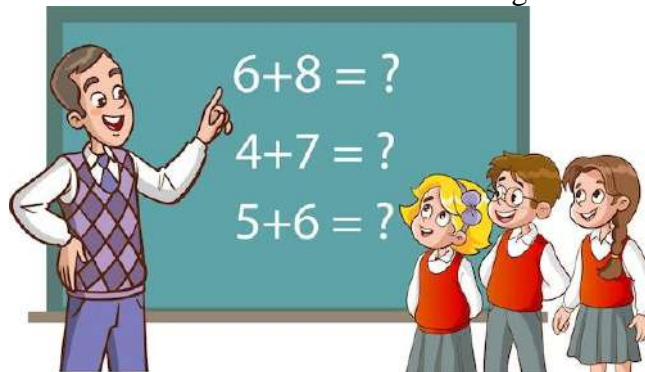
$$\begin{aligned} & \frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} \\ &= \left[ \frac{1}{3-\sqrt{8}} \times \frac{3+\sqrt{8}}{3+\sqrt{8}} \right] - \left[ \frac{1}{\sqrt{8}-\sqrt{7}} \times \frac{\sqrt{8}+\sqrt{7}}{\sqrt{8}+\sqrt{7}} \right] + \left[ \frac{1}{\sqrt{7}-\sqrt{6}} \times \frac{\sqrt{7}+\sqrt{6}}{\sqrt{7}+\sqrt{6}} \right] \\ & - \left[ \frac{1}{\sqrt{6}-\sqrt{5}} \times \frac{\sqrt{6}+\sqrt{5}}{\sqrt{6}+\sqrt{5}} \right] + \left[ \frac{1}{\sqrt{5}-2} \times \frac{\sqrt{5}+2}{\sqrt{5}+2} \right] \\ &= \left[ \frac{3+\sqrt{8}}{9-8} \right] - \left[ \frac{\sqrt{8}+\sqrt{7}}{8-7} \right] + \left[ \frac{\sqrt{7}+\sqrt{6}}{7-6} \right] - \left[ \frac{\sqrt{6}+\sqrt{5}}{6-5} \right] + \left[ \frac{\sqrt{5}+2}{5-4} \right] \\ &= [3+\sqrt{8}] - [\sqrt{8}+\sqrt{7}] + [\sqrt{7}+\sqrt{6}] - [\sqrt{6}+\sqrt{5}] + [\sqrt{5}+2] \\ &= 3+\sqrt{8}-\sqrt{8}-\sqrt{7}+\sqrt{7}+\sqrt{6}-\sqrt{6}-\sqrt{5}+\sqrt{5}+2=5 \end{aligned}$$

### SECTION – E (Case Study Based Questions)

Questions 19 to 20 carry 4 marks each.

19. Mr. Kumar, a Mathematics teacher explained some key points of unit 1 of class IX to his students. Some are given here.

- There are infinite rational numbers between any two rational numbers.
- Rationalisation of a denominator means to change the irrational denominator to rational form.
- A number is irrational if its decimal form is non-terminating non-recurring



On the basis of these key points, Answer the following questions

- What is the reciprocal of  $2 + \sqrt{3}$  ?
- Find a rational number between  $\sqrt{2}$  and  $\sqrt{3}$
- Simplify  $(\sqrt{3}-\sqrt{7})^3$

OR

- Express  $\frac{4}{7}$  in decimal form and state the kind of decimal expansion.

Ans:

(a) Reciprocal of  $2 + \sqrt{3}$  is  $\frac{1}{2+\sqrt{3}}$

By Rationalisation,

$$= \frac{1}{2+\sqrt{3}} \times \frac{2-\sqrt{3}}{2-\sqrt{3}} = \frac{2-\sqrt{3}}{(2)^2-(\sqrt{3})^2} = \frac{2-\sqrt{3}}{4-3} = \frac{2-\sqrt{3}}{1} = 2-\sqrt{3}$$

(b)  $\sqrt{2} = 1.414$  and  $\sqrt{3} = 1.732$

Ans. = 1.5



$$\begin{aligned}
 \text{(c) } (\sqrt{3} - \sqrt{7})^3 &= (\sqrt{3})^3 - (\sqrt{7})^3 - 3(\sqrt{3})^2\sqrt{7} + 3(\sqrt{3})(\sqrt{7})^2 \\
 &= 3\sqrt{3} - 7\sqrt{7} - 9\sqrt{7} + 21\sqrt{3} \\
 &= 24\sqrt{3} - 16\sqrt{7}
 \end{aligned}$$

OR

$$\text{(c) } \frac{4}{7} = 0.571428571428\dots = \overline{0.571428}$$

Therefore, the decimal expansion of the given rational number is non-terminating recurring (repeating).

- 20.** In January 2021, the vaccination drive for COVID -19 started in 7 states of a country. More than 60% of the people were vaccinated in 4 states out of 7 states, In one of the state vaccination drive has not been started due to flood although vaccine dose was supplied to that state in advance. In February 2021, 4 more states were included in this drive and 2 states have got remarkable response from the people and more than 80% of the population got vaccinated there. Using this information answer the following questions:



- (a) In January 2021, more than 60% of people were vaccinated in 4 states out of 7 states. Find the decimal representation of  $\frac{4}{7}$  (2)
- (b) In 2 states out of 11 states, more than 80% of people participated in vaccination drive in two months. Find the decimal form of  $\frac{2}{11}$  (2)

OR

- (b) The fraction for state where vaccination not started in January 2021 is  $\frac{1}{7}$  and its decimal form is  $\overline{0.142857}$ . Find the decimal form of  $\frac{6}{7}$ . (2)

Ans:

(a) Dividing 4 by 7 as:

$$\begin{array}{r} 7 \overline{)4.0000000} \text{ (0.571428)} \\ \underline{-35} \phantom{0000000} \\ 50 \phantom{0000000} \\ \underline{-49} \phantom{0000000} \\ 10 \phantom{0000000} \\ \underline{-7} \phantom{0000000} \\ 30 \phantom{0000000} \\ \underline{-28} \phantom{0000000} \\ 20 \phantom{0000000} \\ \underline{-14} \phantom{0000000} \\ 60 \phantom{0000000} \\ \underline{-56} \phantom{0000000} \\ 40 \phantom{0000000} \end{array}$$

$$\text{Ans.} = 0.\overline{571428}$$

(b) Decimal form of

$$\frac{2}{11} = 0.181818 = 0.\overline{18}$$

$$11 \overline{)2.0000000} \text{ (0.181818)}$$

$$\begin{array}{r} \underline{-11} \phantom{0000000} \\ 90 \phantom{0000000} \\ \underline{-88} \phantom{0000000} \\ 20 \phantom{0000000} \\ \underline{-11} \phantom{0000000} \\ 90 \phantom{0000000} \\ \underline{-88} \phantom{0000000} \\ 20 \phantom{0000000} \\ \underline{-11} \phantom{0000000} \\ 90 \phantom{0000000} \\ \underline{-88} \phantom{0000000} \\ 20 \phantom{0000000} \end{array}$$

OR

$$\text{If } \frac{1}{7} \text{ is } 0.\overline{142857}$$

$$\text{then } \frac{6}{7} \text{ is}$$

$$6 \times \frac{1}{7} = 0.\overline{857142}$$

