

Class 7  
Subject Mathematics  
Chapter 2. Rational Numbers  
Answer Key

ASSIGNMENT 1. Exercise 2.1

- 1.(i)  $1/-3 < -1/4$   
(ii)  $-4/5 < -5/7$   
(iii)  $-5/7 < 2/3$   
(iv)  $5/-11 = -5/11$   
(v)  $0 > -7/6$   
(vi)  $-7/8 = 14/-16$   
(vii)  $-8/5 > -7/4$
- 2.(i)  $-5/3, -10/6, -15/9, -20/12, -25/15$   
(ii)  $5/6, 10/12, 15/18, 20/24, 25/30$   
(iii)  $4/-3, 8/-6, 12/-9, 16/-12, 20/-15$   
(iv)  $5/-7, 10/-14, 15/-21, 20/-28, 25/-35$   
(v)  $-4/-18, -6/-27, -8/-36, -10/-45$
- 3.(i)  $21/15 \div 3/3 = 7/5$   
(ii)  $60/144 \div 12/12 = 5/12$   
(iii)  $48/-72 \div 24/24 = 2/-3$   
(iv)  $-88/72 \div 8/8 = -11/9$   
(v)  $-8/10 \div 2/2 = -4/5$   
(vi)  $25/45 \div 5/5 = 5/9$   
(vii)  $12/16 \div 4/4 = 3/4$
- 4.(i)  $-4/9$  and  $-16/36$   
(ii)  $-16/20$  and  $20/-25$   
(v)  $-2/-3$  and  $2/3$
- 7.(i)  $7/-8 < -13/-5$  (LCM is 40 =  $-35/40$  and  $104/40$ )  
(ii)  $-5/6 > -4/3$  (LCM is 6 =  $-5/6$  and  $-8/6$ )  
(iii)  $-1/4 < 1/4$   
(iv)  $5/-8 < -7/12$  (LCM is 24 =  $-15/24$  and  $-14/24$ )  
(v)  $7/8 > 0$   
(vi)  $-2/5 > 3/-7$  (LCM is 35 =  $-14/35$  and  $-15/35$ )  
(vii)  $-5/13 > 7/11$  (LCM is 143 =  $-55/143$  and  $91/143$ )
- 8 (i)  $2/3, 5/6, 7/8$   
(ii)  $27/55, 9/10, 10/11$   
(iii)  $-4/3, -2/9, 1/3$   
(iv)  $-5/5, -3/7, -1/7$   
(v)  $-7/10, 2/-3, 5/-8, -7/-12$

- 9 (i) -2 and -1.LCM = 6  
 $-11/6, -10/6, -9/6, -8/6, -7/6$   
 (ii)  $\frac{1}{3}$  and  $\frac{1}{4}$ .LCM = 120  
 $40/120, 39/120, 38/120, 36/120, 31/120$   
 (iii)  $-\frac{1}{2}$  and  $-\frac{3}{4}$ . LCM = 24  
 $-12/24, -13/24, -14/24, -15/24, -16/24$   
 (iv)  $\frac{1}{3}$  and  $\frac{1}{5}$ . LCM = 45  
 $14/45, 13/45, 12/45, 11/45, 10/45$   
 (v)  $-\frac{5}{5}$  and  $-\frac{2}{3}$ .LCM = 45  
 $-35/45, -34/45, -33/45, -32/45, -31/45$

- 10.(i)  $-2/6, -3/9, -4/12, -5/15, -6/18, -7/21$   
 (ii)  $-15/25, -18/30, -21/35, -24/40$   
 (iii)  $-4/16, -5/20, -6/24, -7/28$   
 (iv)  $8/-12, 10/-15, 12/-18, 14/-21$

## ASSIGNMENT 2. Exercis 2.2

- 1.(i)  $6/7 + 4/7 = 10/7$   
 (ii)  $4/7 + (-17/7) = 4/7 - 17/7 = -13/7$   
 (iii)  $-3/11 + 5/9 = 3/11 + 5/9 = 27/99 + 55/99 = 82/99$   
 (iv)  $-8/19 + -2/57 = -8/19 - 2/57 = -24/57 - 2/57 = -26/57$   
 (v)  $-\frac{2}{3} + 0 = -\frac{2}{3}$   
 (vi)  $-7/3 + 23/5 = -35/15 + 69/15 = 34/15$   
 (vii)  $-4/9 + \frac{5}{8} = -32/72 + 45/72 = 13/72$   
 (viii)  $6/-5 + (-13/-8) = -6/5 + 13/8 = -48/40 + 65/40 = 17/40$   
 (ix)  $-5/13 - 7/11 = -55/143 - 91/143 = -146/143$   
 (x)  $-6/13 - 11/26 = -12/26 - 11/26 = -23/26$

- 2.(i)  $14/8 + 17/8 = 31/8$   
 (ii)  $5/63 + 6/21 = 5/63 + 18/63 = 23/63$   
 (iii)  $-\frac{1}{4} - \frac{3}{8} = -2/8 - \frac{3}{8} = -\frac{5}{8}$   
 (iv)  $-13/14 + 6/7 = -13/14 + 12/14 = -1/14$   
 (v)  $-6/13 + 7/15 = -90/195 + 91/195 = 1/195$   
 (vi)  $-19/9 - 6/1 = -19/9 - 54/9 = -73/9$   
 (vii)  $-7/9 - \frac{5}{8} = -56/72 - 45/72 = -101/72$   
 (viii)  $7/9 - \frac{2}{5} = 35/45 - 18/45 = 17/45$   
 (ix)  $11/5 + \frac{1}{3} = 33/15 + 5/15 = 38/15$   
 (x)  $2/7 + \frac{5}{6} = 12/42 + 35/42 = 47/42$

- 3.(i)  $-\frac{3}{5} \times 2 = -6/5$   
 (ii)  $3/10 \times -9 = -27/10$   
 (iii)  $-6/5 \times 9/11 = -54/55$   
 (iv)  $3/7 \times -\frac{2}{5} = -6/35$

$$(v) -6/11 \times 44/3 = -2 \times 4 = -8$$

$$(vi) 3/13 \times \frac{2}{5} = 6/65$$

$$(vii) -5/9 \times 81/35 = -9/7$$

$$(viii) 9/5 \times -1/27 = -1/15$$

$$(ix) 4/7 \times -\frac{3}{5} = -8/35$$

$$4.(i) \frac{7}{8} \times 5/3 = 35/24$$

$$(ii) -9/13 \times 6/-5 = 54/65$$

$$(iii) 7/18 \times -9/4 = -7/8$$

$$(iv) -\frac{3}{5} \times \frac{1}{2} = -3/10$$

$$(v) -\frac{1}{8} \times 4/3 = -\frac{1}{6}$$

$$(vi) -7/12 \times 13/-2 = 91/24$$

$$(vii) 15/7 \times -7/5 = -3$$

$$(viii) -3/13 \times -65/4 = 15/4$$

$$5. \frac{4}{5}, \frac{3}{5}, -2/6$$

$$6. -\frac{3}{5} + -6/5 = -\frac{3}{5} - 6/5 = -9/5$$

$$7. -16/5$$

$$8.(i) 16/-7 \quad (ii) 20/27 \quad (iii) 104/21 \quad (iv) -3/2 \times -6/3 = 3$$
$$\frac{1}{3}$$

$$9. \frac{2}{3} + 17/6 = 12/30 + 85/30 = 97/30$$

$$10. 1 - \frac{3}{5} = \frac{2}{5}$$

$$11. 49/8 + 15/2 + 19/4 + 17/2 =$$

$$49/8 + 60/8 + 38/8 + 68/8 = 215/8$$

$$12. 1 - (\frac{2}{3} + \frac{1}{4}) = 1 - (8/12 + 3/12) = 1 - 11/12 = 1/12$$

$$13. 11/25 + 17/25 = 28/25 \text{ km}$$

$$14. 6 \frac{1}{6} - 2 \frac{1}{3} = 37/6 - 7/3 = 37/6 - 14/6 = 23/6 = 3 \frac{5}{6}$$

$$15. \frac{3}{5} + \frac{2}{5} = 7/5 = 1 \frac{2}{5} \text{ hrs.}$$

$$16. 4/9 - (-\frac{7}{8}) = 4/9 + \frac{7}{8} = 32/72 + 63/72 = 95/72$$

$$17. -\frac{2}{3} - \frac{5}{6} = -4/6 - 5/6 = -9/6 = -3/2$$

$$18. D=S \times T. 56 \frac{4}{5} \times 7 \frac{1}{2} = 284/5 \times 15/2 = 426 \text{ km}$$

$$19. -33/8 \div ? = -11/2$$

$$-33/8 \div 3/4 = -11/2.$$

$$20. 83 \frac{1}{2} \div 2 \frac{1}{2} = 167/2 \div 5/2 = 167/2 \times 2/5 = 167/5$$

Rs.33.40

$$21. 82 \frac{1}{2} \div 2 \frac{3}{4} = 165/2 \div 11/4 = 165/2 \times 4/11 = 30$$

$$22. 2 \frac{1}{5} \times \frac{1}{3} = 11/5 \times 1/3 = 11/15$$

$$23. 3/4 \times 3 = 9/4 = 2 \frac{1}{4} \text{m}$$

$$24. 5 \frac{1}{2} + 12 \frac{3}{4} + 1 \frac{2}{3} = 11/2 + 51/4 + 5/3 =$$
$$66/12 + 153/12 + 20/12 = 239/12 = 19.11/12 \text{km}$$

$$25. \text{Area} = \text{length} \times \text{breadth. side} = \text{area/side}$$
$$83 \frac{3}{4} \div 12 \frac{1}{2} = 335/4 \div 25/2 = 335/4 \times 2/25$$
$$67/10 = 6.7/10 \text{ m}$$

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