EduSahara™ Assignment

Name : Properties of Rational Numbers

Chapter : Real Numbers

Grade : ICSE Grade VIII

1. Which of the following are true?

   a) $\frac{7}{10} \div \frac{45}{16} = \frac{45}{16} \div \frac{7}{10}$

   b) $\frac{7}{10} - \frac{68}{9} = \frac{68}{9} - \frac{7}{10}$

   c) $\frac{3}{4} + \frac{68}{9} = \frac{68}{9} + \frac{3}{4}$

   d) $\frac{3}{4} \times \frac{45}{16} = \frac{45}{16} \times \frac{3}{4}$

   (i) {a,c} (ii) {b,d} (iii) {a,b,c} (iv) {c,d} (v) {a,d,c}

2. Which of the following are true?

   a) $\frac{12}{17} - (\frac{133}{13} - \frac{7}{17}) = (\frac{12}{17} - \frac{133}{13}) - \frac{7}{17}$

   b) $\frac{11}{7} \times (\frac{45}{13} \times \frac{19}{12}) = (\frac{11}{7} \times \frac{45}{13}) \times \frac{19}{12}$

   c) $\frac{12}{17} \div (\frac{45}{13} \div \frac{4}{11}) = (\frac{12}{17} \div \frac{45}{13}) \div \frac{4}{11}$

   d) $\frac{11}{7} + (\frac{133}{13} + \frac{19}{4}) = (\frac{11}{7} + \frac{133}{13}) + \frac{19}{4}$

   (i) {a,b} (ii) {c,d} (iii) {a,c,b} (iv) {a,d,b} (v) {b,d}

3. Which of the following are true?

   a) $\frac{14}{15} \times (\frac{49}{4} + \frac{5}{9}) = (\frac{14}{15} \times \frac{49}{4}) + (\frac{14}{15} \times \frac{5}{9})$

   b) $\frac{13}{8} \div (\frac{49}{4} + \frac{13}{10}) = (\frac{13}{8} \div \frac{49}{4}) + (\frac{13}{8} \div \frac{13}{10})$

   c) $\frac{13}{8} - (\frac{21}{20} \times \frac{8}{9}) = (\frac{13}{8} - \frac{21}{20}) \times (\frac{13}{8} - \frac{8}{9})$

   d) $\frac{14}{15} \times (\frac{21}{20} - \frac{3}{4}) = (\frac{14}{15} \times \frac{21}{20}) - (\frac{14}{15} \times \frac{3}{4})$

   (i) {c,d} (ii) {b,a} (iii) {b,d,a} (iv) {b,c,a} (v) {a,d}

4. Which of the following are true?

   a) rational numbers are closed under subtraction
   b) rational numbers are closed under addition
   c) rational numbers are closed under division
   d) rational numbers are closed under multiplication

   (i) {a,b,d} (ii) {c,a} (iii) {c,a,b} (iv) {c,d} (v) {c,b}

5. Which of the following are true?

a) real numbers are closed under subtraction
b) real numbers are closed under division
c) real numbers are closed under addition
d) real numbers are closed under multiplication

(i) {b,a,c} (ii) {a,c,d} (iii) {b,d} (iv) {b,a} (v) {b,c}

6. Which of the following are true?

a) $\frac{7}{2} \div \frac{70}{9} = \frac{70}{9} \div \frac{7}{2}$

b) $\frac{13}{14} \times \frac{70}{9} = \frac{70}{9} \times \frac{13}{14}$

c) $\frac{7}{2} - \frac{92}{11} = \frac{92}{11} - \frac{7}{2}$

d) $\frac{13}{14} + \frac{92}{11} = \frac{92}{11} + \frac{13}{14}$

(i) {a,d,b} (ii) {b,d} (iii) {c,d} (iv) {a,b} (v) {a,c,b}

7. Which of the following are true?

a) $\frac{11}{18} \times (\frac{97}{11} \times \frac{19}{12}) = (\frac{11}{18} \times \frac{97}{11}) \times \frac{19}{12}$

b) $\frac{9}{19} \div (\frac{97}{11} \div \frac{11}{14}) = (\frac{9}{19} \div \frac{97}{11}) \div \frac{11}{14}$

c) $\frac{9}{19} - (\frac{95}{16} - \frac{19}{2}) = (\frac{9}{19} - \frac{95}{16}) - \frac{19}{2}$

d) $\frac{11}{18} + (\frac{95}{16} + \frac{17}{18}) = (\frac{11}{18} + \frac{95}{16}) + \frac{17}{18}$

(i) {c,d} (ii) {b,d,a} (iii) {a,d} (iv) {b,c,a} (v) {b,a}

8. Which of the following are true?

a) $\frac{3}{19} - (\frac{27}{4} \times \frac{8}{15}) = (\frac{3}{19} - \frac{27}{4}) \times (\frac{3}{19} - \frac{8}{15})$

b) $\frac{1}{17} \times (\frac{27}{4} - \frac{7}{8}) = (\frac{1}{17} \times \frac{27}{4}) - (\frac{1}{17} \times \frac{7}{8})$

c) $\frac{3}{19} \div (\frac{25}{9} + \frac{19}{14}) = (\frac{3}{19} \div \frac{25}{9}) + (\frac{3}{19} \div \frac{19}{14})$

d) $\frac{1}{17} \times (\frac{25}{9} + \frac{10}{9}) = (\frac{1}{17} \times \frac{25}{9}) + (\frac{1}{17} \times \frac{10}{9})$

(i) {a,b} (ii) {c,d} (iii) {b,d} (iv) {a,c,b} (v) {a,d,b}

9. Which of the following are true?

a) $\frac{18}{13} \times \frac{185}{19} = \frac{185}{19} \times \frac{18}{13}$

b) $\frac{1}{6} \div \frac{185}{19} = \frac{185}{19} \div \frac{1}{6}$

c) $\frac{18}{13} + \frac{37}{3} = \frac{37}{3} + \frac{18}{13}$

d) $\frac{1}{6} - \frac{37}{3} = \frac{37}{3} - \frac{1}{6}$

(i) {a,c} (ii) {d,c} (iii) {b,a} (iv) {b,c,a} (v) {b,d,a}

10. Which of the following are true?

a) $\frac{1}{12} + (\frac{3}{2} + \frac{20}{9}) = (\frac{1}{12} + \frac{3}{2}) + \frac{20}{9}$

b) $\frac{1}{12} \times (\frac{147}{17} \times \frac{13}{10}) = (\frac{1}{12} \times \frac{147}{17}) \times \frac{13}{10}$

c) $\frac{1}{4} - (\frac{3}{2} - \frac{19}{20}) = (\frac{1}{4} - \frac{3}{2}) - \frac{19}{20}$

d) $\frac{1}{4} \div (\frac{147}{17} \div \frac{11}{19}) = (\frac{1}{4} \div \frac{147}{17}) \div \frac{11}{19}$

(i) {c,b,a} (ii) {a,b} (iii) {d,b} (iv) {c,d,a} (v) {c,a}

11. Which of the following are true?

a) $\frac{11}{2} \div (\frac{27}{4} + \frac{10}{11}) = (\frac{11}{2} \div \frac{27}{4}) + (\frac{11}{2} \div \frac{10}{11})$

b) $\frac{11}{2} - (\frac{43}{12} \times \frac{4}{3}) = (\frac{11}{2} - \frac{43}{12}) \times (\frac{11}{2} - \frac{4}{3})$

c) $\frac{8}{13} \times (\frac{27}{4} + \frac{15}{8}) = (\frac{8}{13} \times \frac{27}{4}) + (\frac{8}{13} \times \frac{15}{8})$

d) $\frac{8}{13} \times (\frac{43}{12} - \frac{1}{3}) = (\frac{8}{13} \times \frac{43}{12}) - (\frac{8}{13} \times \frac{1}{3})$

(i) {a,c} (ii) {a,d,c} (iii) {c,d} (iv) {b,d} (v) {a,b,c}

Assignment Key

1) (iv)	2) (v)	3) (v)	4) (i)	5) (ii)	6) (ii)
7) (iii)	8) (iii)	9) (i)	10) (ii)	11) (iii)	