



1. Which of the following are true?

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

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

2. The additive inverse of  $(\frac{-7}{8})$  is

- (i) 0 (ii)  $\frac{8}{7}$  (iii)  $\frac{8}{-7}$  (iv)  $(\frac{-1}{8})$  (v)  $\frac{7}{8}$

3. The multiplicative inverse of  $(\frac{-4}{7})$  is

- (i)  $(\frac{-3}{4})$  (ii)  $(\frac{-7}{4})$  (iii)  $(-3\frac{3}{4})$  (iv)  $(-2\frac{3}{4})$  (v)  $\frac{1}{4}$

4. Which of the following are true?

a)  $\frac{17}{5} - \frac{68}{11} = \frac{68}{11} - \frac{17}{5}$

b)  $\frac{14}{3} \times \frac{114}{11} = \frac{114}{11} \times \frac{14}{3}$

c)  $\frac{17}{5} \div \frac{114}{11} = \frac{114}{11} \div \frac{17}{5}$

d)  $\frac{14}{3} + \frac{68}{11} = \frac{68}{11} + \frac{14}{3}$

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

5. Which of the following are true?

a)  $\frac{19}{15} \div (\frac{36}{7} \div \frac{16}{19}) = (\frac{19}{15} \div \frac{36}{7}) \div \frac{16}{19}$

b)  $\frac{15}{13} + (\frac{31}{6} + \frac{11}{9}) = (\frac{15}{13} + \frac{31}{6}) + \frac{11}{9}$

c)  $\frac{19}{15} - (\frac{31}{6} - \frac{17}{15}) = (\frac{19}{15} - \frac{31}{6}) - \frac{17}{15}$

d)  $\frac{15}{13} \times (\frac{36}{7} \times \frac{15}{2}) = (\frac{15}{13} \times \frac{36}{7}) \times \frac{15}{2}$

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

6. Which of the following are true?

a)  $\frac{1}{3} \div (\frac{52}{5} + \frac{17}{20}) = (\frac{1}{3} \div \frac{52}{5}) + (\frac{1}{3} \div \frac{17}{20})$

b)  $\frac{1}{20} \times (\frac{23}{2} - \frac{16}{3}) = (\frac{1}{20} \times \frac{23}{2}) - (\frac{1}{20} \times \frac{16}{3})$

c)  $\frac{1}{20} \times (\frac{52}{5} + \frac{1}{20}) = (\frac{1}{20} \times \frac{52}{5}) + (\frac{1}{20} \times \frac{1}{20})$

d)  $\frac{1}{3} - (\frac{23}{2} \times \frac{17}{15}) = (\frac{1}{3} - \frac{23}{2}) \times (\frac{1}{3} - \frac{17}{15})$

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

7. Which of the following is true?

a)  $9.6400 - 17.6600 = 17.6600 - 9.6400$

b)  $17.6600 \div 16.6100 = 16.6100 \div 17.6600$

c)  $16.6100 \times 10.3200 = 10.3200 \times 16.6100$

d)  $10.3200 + 9.6400 = 9.6400 + 10.3200$

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

8. Which of the following is true?

a)  $6.9200 + (4.4900 + 20.1200) = (6.9200 + 4.4900) + 20.1200$

b)  $4.4900 - (20.1200 - 20.1100) = (4.4900 - 20.1200) - 20.1100$

c)  $20.1100 \times (6.9200 \times 4.4900) = (20.1100 \times 6.9200) \times 4.4900$

d)  $20.1200 \div (20.1100 \div 6.9200) = (20.1200 \div 20.1100) \div 6.9200$

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

9. Which of the following is true?

a)  $19.9100 - (6.3700 \times 7.5000) = (19.9100 - 6.3700) \times (19.9100 - 7.5000)$

b)  $6.3700 \div (7.5000 + 5.2600) = (6.3700 \div 7.5000) + (6.3700 \div 5.2600)$

c)  $7.5000 \times (5.2600 + 19.9100) = (7.5000 \times 5.2600) + (7.5000 \times 19.9100)$

d)  $5.2600 \times (19.9100 - 6.3700) = (5.2600 \times 19.9100) - (5.2600 \times 6.3700)$

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

## Assignment Key

---

1) (iv)

2) (v)

3) (ii)

4) (iv)

5) (v)

6) (i)

7) (v)

8) (iii)

9) (ii)