



1. Which of the following are true?

a)  $13 - 10 = 10 - 13$

b)  $10 \div 6 = 6 \div 10$

c)  $6 \times 16 = 16 \times 6$

d)  $16 + 13 = 13 + 16$

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

2. Which of the following are true?

a)  $7 \times (19 \times 2) = (7 \times 19) \times 2$

b)  $19 + (2 + 6) = (19 + 2) + 6$

c)  $2 - (6 - 7) = (2 - 6) - 7$

d)  $6 \div (7 \div 19) = (6 \div 7) \div 19$

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

3. Which of the following are true?

a)  $9 \times (13 + 15) = (9 \times 13) + (9 \times 15)$

b)  $13 \times (15 - 6) = (13 \times 15) - (13 \times 6)$

c)  $6 \div (9 + 13) = (6 \div 9) + (6 \div 13)$

d)  $15 - (6 \times 9) = (15 - 6) \times (15 - 9)$

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

4. Which of the following are true?

a)  $2 + 6 = 6 + 2$

b)  $18 \div 19 = 19 \div 18$

c)  $6 - 18 = 18 - 6$

d)  $19 \times 2 = 2 \times 19$

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

5. Which of the following are true?

a)  $16 \times (15 \times 6) = (16 \times 15) \times 6$

b)  $6 - (3 - 16) = (6 - 3) - 16$

c)  $3 \div (16 \div 15) = (3 \div 16) \div 15$

d)  $15 + (6 + 3) = (15 + 6) + 3$

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

6. Which of the following are true?

a)  $19 - (6 \times 12) = (19 - 6) \times (19 - 12)$

b)  $6 \div (12 + 8) = (6 \div 12) + (6 \div 8)$

c)  $8 \times (19 - 6) = (8 \times 19) - (8 \times 6)$

d)  $12 \times (8 + 19) = (12 \times 8) + (12 \times 19)$

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

7. Which of the following are true?

a) whole numbers are closed under addition

b) whole numbers are closed under multiplication

c) whole numbers are closed under subtraction

d) whole numbers are closed under division

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

8. Which of the following are true?

a) integers are closed under addition

b) integers are closed under subtraction

c) integers are closed under multiplication

d) integers are closed under division

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

## Assignment Key

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1) (iv)

2) (i)

3) (v)

4) (i)

5) (i)

6) (iii)

7) (ii)

8) (v)