



1. Which of the following are true?

- a)  $12+13=13+12$
  - b)  $13-17=17-13$
  - c)  $6\times 12=12\times 6$
  - d)  $17\div 6=6\div 17$
- (i) {d,c} (ii) {b,c,a} (iii) {b,a} (iv) {b,d,a} (v) {a,c}

2. Which of the following are true?

- a)  $9\times(3\times 12)=(9\times 3)\times 12$
  - b)  $12-(13-9)=(12-13)-9$
  - c)  $13\div(9\div 3)=(13\div 9)\div 3$
  - d)  $3+(12+13)=(3+12)+13$
- (i) {b,d,a} (ii) {a,d} (iii) {b,a} (iv) {c,d} (v) {b,c,a}

3. Which of the following are true?

- a)  $19\times(12+6)=(19\times 12)+(19\times 6)$
  - b)  $12\times(6-11)=(12\times 6)-(12\times 11)$
  - c)  $6-(11\times 19)=(6-11)\times(6-19)$
  - d)  $11\div(19+12)=(11\div 19)+(11\div 12)$
- (i) {c,d,a} (ii) {c,b,a} (iii) {a,b} (iv) {d,b} (v) {c,a}

4. Which of the following are true?

- a) integers are closed under multiplication
  - b) integers are closed under addition
  - c) integers are closed under subtraction
  - d) integers are closed under division
- (i) {d,a} (ii) {d,a,b} (iii) {a,b,c} (iv) {d,c} (v) {d,b}

5. Which of the following are true?

- a)  $15-4=4-15$
  - b)  $19\times 6=6\times 19$
  - c)  $4\div 19=19\div 4$
  - d)  $6+15=15+6$
- (i) {a,d,b} (ii) {a,c,b} (iii) {c,d} (iv) {b,d} (v) {a,b}

6. Which of the following are true?

- a)  $7 + (12 + 16) = (7 + 12) + 16$
  - b)  $16 \div (18 \div 7) = (16 \div 18) \div 7$
  - c)  $18 \times (7 \times 12) = (18 \times 7) \times 12$
  - d)  $12 - (16 - 18) = (12 - 16) - 18$
- (i) {b,d,a} (ii) {b,a} (iii) {b,c,a} (iv) {d,c} (v) {a,c}
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7. Which of the following are true?

- a)  $5 \times (14 - 17) = (5 \times 14) - (5 \times 17)$
  - b)  $17 \div (2 + 5) = (17 \div 2) + (17 \div 5)$
  - c)  $2 \times (5 + 14) = (2 \times 5) + (2 \times 14)$
  - d)  $14 - (17 \times 2) = (14 - 17) \times (14 - 2)$
- (i) {a,c} (ii) {b,a} (iii) {b,c,a} (iv) {b,d,a} (v) {d,c}

## Assignment Key

1) (v)

2) (ii)

3) (iii)

4) (iii)

5) (iv)

6) (v)

7) (i)