



Date : 23rd Jan 2024

Logical Reasoning - Mathematical Reasoning

English

**Q:1** By interchanging which two signs will the given equation be correct?

$$12 \div 63 + 253 \times 23 - 635 = 132$$

1. - and  $\div$
2.  $\times$  and  $\div$
3. - and  $\times$
4. + and -

**Q:2** Which two signs need to be interchanged to make the following equation correct?

$$91 - 13 \div 6 + 4 \times 5 = 21$$

1.  $\div$  and -
2.  $\div$  and  $\times$
3. + and -
4. + and  $\times$

**Q:3** Which set of signs should be put at the place of \* in the following?

$$175 * 5 * 5 = 6 * 10 * 2$$

1.  $\times, -, \times, +$
2.  $\div, -, \times, +$
3.  $\div, -, \times, \div$
4.  $\times, +, +, \times$

**Q:4** What will come in the place of the question mark (?) in the following equation, if '+' is interchanged to '-' and 'x' is interchanged to '÷'?

$$(2400 \times 12 + 6 - 4) \div 2 \times 6 - 8$$

1. 76
2. 82
3. 74
4. 86

**Q:5** By interchanging the given two signs  $\div$  and  $\times$ , and two numbers 75 and 25 (not digits), which of the following equations will be correct?

I.  $50 \div 150 \times 75 + 25 - 12 = 65$

II.  $75 \times 5 \div 25 + 14 - 10 = 379$

1. Neither I nor II is correct.
2. Only II is correct.
3. Only I is correct.
4. Both I and II are correct.

**Q:6** What will come in the place of '?' in the following equation, if '+' and 'x' are interchanged and also '-' and '÷' are interchanged?

$$5 \times 24 + 54 - 6 \div 10 = ?$$

1. 211
2. 209
3. 206
4. 208

**Q:7** Which two numbers (NOT digits) should be interchanged to make the following equation correct?

$$52 \div 2 + 13 \times 9 - 4 = 18$$

1. 13 and 4
2. 2 and 13
3. 2 and 4
4. 2 and 9

**Q:8** What will come in the place of '?' in the following equation, if '+' and 'x' are interchanged and also '-' and '÷' are interchanged?

$$3 \times 18 + 45 - 15 \div 8 = ?$$

1. 48
2. 39
3. 49
4. 46

**Q:9** What will come in the place of '?' in the following equation, if '+' and 'x' are interchanged and also '-' and '÷' are interchanged?

$$2 \times 24 + 32 - 8 \div 10 = ?$$

1. 78
2. 89
3. 76
4. 88

**Q:10** Which two numbers (NOT digits) should be interchanged to make the following equation correct?

$$36 \div 3 + 13 \times 4 - 13 = 35$$

1. 13 and 4
2. 3 and 4
3. 3 and 36
4. 13 and 36



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### Answer Key

1. (2)	2. (1)	3. (3)	4. (3)	5. (2)
6. (1)	7. (2)	8. (3)	9. (4)	10. (2)

### Answers and Solutions

**Q:1** The correct answer is **Option 2** i.e.  $\times$  and  $\div$   
Given equation:  $12 \div 63 + 253 \times 23 - 635 = 132$

**Option 1:** - and  $\div$

After interchanging the expression becomes:  
 $= 12 - 63 + 253 \times 23 \div 635 = 132$   
 $= -41.84$  is not equal to 132.

**Option 2:**  $\times$  and  $\div$

After interchanging the expression becomes:  
 $= 12 \times 63 + 253 \div 23 - 635 = 132$   
 $= 132$  is equal to 132.

As we have found our answer, so there is no need of checking further options.

Hence, the correct answer is  $\times$  and  $\div$ .

**Q:2** The correct answer is **Option 1** i.e.  $\div$  and -  
Given equation:  $91 - 13 \div 6 + 4 \times 5 = 21$

**Option 1:**  $\div$  and -

After interchanging the expression becomes:  
 $= 91 \div 13 - 6 + 4 \times 5 = 21$   
 $= 7 - 6 + 4 \times 5 = 21$   
 $= 7 - 6 + 20 = 21$   
 $= 21$  is equal to 21.

Hence, the correct answer is  $\div$  and -.

**Q:3** The correct answer is **Option 3** i.e.  $\div$ , -,  $\times$ ,  $\div$ .  
Checking the options:

**Option 1:**  $\times$ , -,  $\times$ , +

$175 \times 5 \times 5 = 6 \times 10 \times 2$   
 $175 \times 5 - 5 = 6 \times 10 + 2$   
 $875 - 5 = 62$   
870 is not equal to 62

**Option 2:**  $\div$ , -,  $\times$ , +

$175 \times 5 \times 5 = 6 \times 10 \times 2$   
 $175 \div 5 - 5 = 6 \times 10 + 2$   
 $35 - 5 = 62$

30 is not equal to 62

**Option 3:**  $\div$ , -,  $\times$ ,  $\div$

$175 \times 5 \times 5 = 6 \times 10 \times 2$

$175 \div 5 - 5 = 6 \times 10 \div 2$

$35 - 5 = 6 \times 5$

**30 is equal to 30.**

As we have already got our answer there is no need to check further.

Hence, the correct answer is  $\div$ , -,  $\times$ ,  $\div$ .

**Q:4** The correct option is **Option 3** i.e. **74**.

Given equation  $(2400 \times 12 + 6 - 4) \div 2 \times 6 - 8$

'+' is interchanged to '-' and 'x' is interchanged to ' $\div$ '

A new equation will be

$(2400 \div 12 - 6 + 4) \times 2 \div 6 + 8$

Using BODMAS

$(200 - 2) \times 2 \div 6 + 8$

$= 198 \times 2 \div 6 + 8$

$= 396 \div 6 + 8$

$= 66 + 8$

$= 74$

Hence, the correct answer is **74**.

**Q:5** The correct answer is **Option 2** i.e. **Only II is correct**.

**Given equation:**

I.  $50 \div 150 \times 75 + 25 - 12 = 65$

II.  $75 \times 5 \div 25 + 14 - 10 = 379$

**Given condition:**  $\div$  and  $\times$ , 75 and 25

I.  $50 \div 150 \times 75 + 25 - 12 = 65$

On changing numbers and signs

$= 50 \times 150 \div 25 + 75 - 12$

$= 50 \times 6 + 75 - 12$

$= 375 - 12$

$= 363$

$= 363$  is not equal to 65.

II.  $75 \times 5 \div 25 + 14 - 10 = 379$

On changing numbers and signs

$25 \div 5 \times 75 + 14 - 10 = 379$

$= 5 \times 75 + 14 - 10$

$= 375 + 14 - 10$

$= 375 + 4$

$= 379$

$= 379$  is equal to 379.

Thus, only equation II is correct.

Hence, **Only II is correct**.

**Q:6** The correct answer is **option 1** i.e. **211**.

The given equation is:  $5 \times 24 + 54 - 6 \div 10 = ?$

If 'x' and '+' are interchanged and '-' and ' $\div$ ' are



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interchanged, the equation becomes:

$$5 + 24 \times 54 \div 6 - 10$$

$$= 221 - 10$$

$$= 211$$

Hence, **211** is the correct answer.

**Q:7** The correct answer is **option 2** i.e. **2 and 13**.

Given equation:  **$52 \div 2 + 13 \times 9 - 4 = 18$**

Checking all the options one by one:

**1. 13 and 4**

$$52 \div 2 + 4 \times 9 - 13 = 18$$

$$26 + 36 - 13 = 18$$

$$49 = 18$$

49 is not equal to 18.

**2. 2 and 13**

$$52 \div 13 + 2 \times 9 - 4 = 18$$

$$4 + 18 - 4 = 18$$

$$18 = 18$$

18 is equal to 18.

The equation is balanced. No need to check other options.

Hence, **2 and 13** is the correct answer.

**Q:8** The correct answer is **option 3** i.e. **49**.

The given equation is:  $3 \times 18 + 45 - 15 \div 8 = ?$

If 'x' and '+' are interchanged and '-' and ' $\div$ ' are interchanged, the equation becomes:

$$3 + 18 \times 45 \div 15 - 8$$

$$= 3 + 54 - 8$$

$$= 49$$

Hence, **49** is the correct answer.

**Q:9** The correct answer is **option 4** i.e. **88**.

The given equation is:  **$2 \times 24 + 32 - 8 \div 10 = ?$**

If 'x' and '+' are interchanged and '-' and ' $\div$ ' are interchanged, the equation becomes:

$$2 + 24 \times 32 \div 8 - 10$$

$$= 2 + 96 - 10$$

$$= 88$$

Hence, **88** is the correct answer.

**Q:10** The correct answer is **option 2** i.e. **3 and 4**.

Given equation:  **$36 \div 3 + 13 \times 4 - 13 = 35$**

Checking all the options one by one:

**1. 13 and 4**

$$36 \div 3 + 4 \times 13 - 4 = 35$$

$$12 + 52 - 4$$

$$64 - 4$$

$$60$$

60 is not equal to 35.

**2. 3 and 4**

$$36 \div 4 + 13 \times 3 - 13 = 35$$

$$9 + 39 - 13 = 35$$

$$35 = 35$$

35 is equal to 35.

The equation is balanced. No need to check other options.

Hence, **3 and 4** is the correct answer.