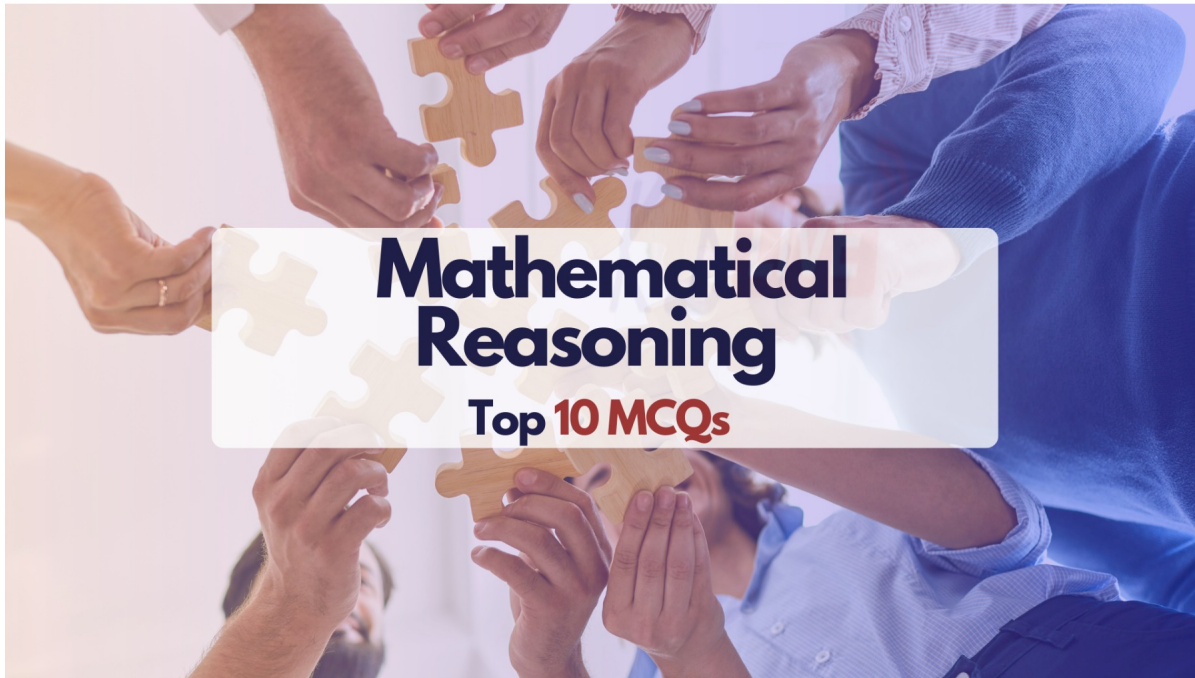


Mathematical Reasoning Questions - Get 10 MCQs with Solutions

Mathematical Reasoning is an important topic of Logical Reasoning with a great presence in SSC exams, having a weightage of 1 - 2 questions. To master Mathematical Reasoning questions, a solid grasp of the concepts and rigorous practice are essential.

In this blog, we'll comprehensively explore the foundations and logical nuances of Mathematical Reasoning. We've included 10 real SSC exam-level questions to give you a preview of the challenges you'll face. Practice questions are categorized into different difficulty levels, ranging from 1 to 10. 1 denotes the least difficult and 10 denotes the most difficult. We have also given an estimated expected time to solve each question, to boost your preparation and speed. Moreover, you can also download Mathematical Reasoning questions and answers PDF by clicking on 'Download PDF' button above.



[Source : KD campus]

Mathematical Reasoning Questions

Q:1 Which set of signs should be put at the place of * in the following?

$$125 * 25 * 6 = 4 * 11 * 14$$

1. ÷, ×, ×, -
2. ÷, ×, +, -

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3. $\times, -, \times, +$

4. $\div, \times, \times, +$

[Difficulty: 5, Estimated time: 1 min]

Starting strong is good.

Q:2 Which of the two numbers must be replaced to make the given equation correct?

$$(175 \times 15 \div 5 + 95) \div 25 = 40$$

1. 15 and 5

2. 5 and 25

3. 95 and 175

4. 15 and 95

[Difficulty: 6, Estimated time: 1 min]

Come on, buckle up.

Q:3 If A means addition, B means multiplication, C means division and D means subtraction then find the value of

$$24 \text{ C } 12 \text{ B } 8 \text{ C } 2 \text{ A } 12 \text{ D } 3 = ?$$

1. 12

2. 17

3. 18

4. 19

[Difficulty: 7, Estimated time: 1 min]

Time flies so quick.

Q:4 Choose the correct set of signs from the alternatives that will make the given equation correct.

$$6 _ 3 _ 5 _ 9 _ 3 = 20$$

1. $+, -, \times, \div$

2. $\times, +, -, \div$

3. $\times, \div, -, +$

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4. $\div, \times, +, -$

[Difficulty: 7, Estimated time: 1 min]

Wow! This is too easy.

Q:5 If '#' means '-', '@' means '+', '%' means ' \times ', and '&' means ' \div ', then what is the value of given equation?

$$112 @ 43 \# (12 \% 6 @ 36) \& 6 \# 116 = ?$$

1. 11

2. 34

3. 19

4. 21

[Difficulty: 6, Estimated time: 1 min]

Hurry up time ticking!

Q:6 Which of the following set of signs must be interchanged to make the given equation correct?

$$200 - 600 \times 400 + 800 \div 100 = 0$$

1. \times and $-$

2. $+$ and $-$

3. \div and $+$

4. $-$ and \div

[Difficulty: 6, Estimated time: 1 min]

Its time to prove.

Q:7 If '\$' means '+', '#' means '-', '@' means ' \times ' and '*' means ' \div ', then what is the value of $5 @ 11 \$ 12 \# 1 * 1$?

1. 43

2. 63

3. 29

4. 66

[Difficulty: 7, Estimated time: 1 min]

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Come on, hurry up!

Q:8 Select the correct combination of mathematical signs that can sequentially replace '*' sign and balance the equation given below.

$$69 * 23 * 2 * 42 * 2 * 44$$

1. +, ×, -, ÷, =
2. ÷, +, ×, -, =
3. ÷, ×, -, +, =
4. -, ×, +, ÷, =

[Difficulty: 8, Estimated time: 1 min]

This shouldn't take much time.

Q:9 Select the correct combination of mathematical signs to replace the * signs and to balance the given equation.

$$26 * 5 * 45 * 9 * 15 = 140$$

1. ×, -, ÷, +
2. +, -, ×, ÷
3. ×, ÷, -, +
4. ÷, +, -, ×

[Difficulty: 7, Estimated time: 1 min]

Wow! This is too easy.

Q:10 If + means ×, - means ÷, ÷ means - and × means ÷, then find the value of

$$39 - 21 \div 63 + 19 \times 21$$

1. 7
2. 9
3. 3
4. 5

[Difficulty: 7, Estimated time: 1 min]

Hurry up time ticking!

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Dive into detailed solutions and discover how to tackle even the trickiest questions. You'll soon find them easy and intriguing, adding depth to your learning experience.

Answer Key of Mathematical Reasoning Questions

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

We've explored various aspects of the same topic together. If you found it easy, that's fantastic! But if you faced challenges, don't worry – detailed solutions are here to clear any doubts and enhance your grasp of the topic.

Solutions of Mathematical Reasoning Questions

Q:1 The correct answer is **Option 1** i.e. $\div, \times, \times, -$

Putting signs of option 1

Given: $125 * 25 * 6 = 4 * 11 * 14$

$$125 \div 25 \times 6 = 4 \times 11 - 14$$

$$5 \times 6 = 44 - 14$$

$$30 = 30$$

There is no need to check other options as we have already got our answer.

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

Q:2 The correct answer is **Option 2** i.e. **5 and 25**

Given equation: $(175 \times 15 \div 5 + 95) \div 25 = 40$

1) 15 and 5

$$(175 \times 5 \div 15 + 95) \div 25$$

$$(58.33 + 95) \div 25$$

$$153.33 \div 25$$

$$6.13 \neq 40$$

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2) 5 and 25

$$(175 \times 15 \div 25 + 95) \div 5$$

$$(105 + 95) \div 5$$

$$200 \div 5$$

$$40 = 40$$

Hence, the correct answer is **5 and 25**.

Q:3 The correct answer is **Option 2** i.e. **17**.

Given the equation: 24 **C** 12 **B** 8 **C** 2 **A** 12 **D** 3

A means addition, **B** means multiplication, **C** means division, and **D** means subtraction

Putting signs,

$$24 \div 12 \times 8 \div 2 + 12 - 3$$

$$2 \times 4 + 12 - 3$$

$$8 + 12 - 3$$

$$20 - 3 = 17$$

Hence, the correct answer is **17**.

Q:4 The Correct answer is **Option 2** i.e. '**×, +, -, ÷**'

Given equation: 6 _ 3 _ 5 _ 9 _ 3 = 20

Let's check each option:

Option 1: +, -, ×, ÷

$$6 + 3 - 5 \times 9 \div 3$$

$$-6 \neq 20$$

Option 2: ×, +, -, ÷

$$6 \times 3 + 5 - 9 \div 3$$

$$20 = 20$$

Since we get our answer from option 2, we don't need to check any other option.

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Hence, **Option 2** is the correct answer.

Q:5 The correct answer is **Option 4** i.e. **21**

Given equation: $112 @ 43 \# (12 \% 6 @ 36) \& 6 \# 116 = ?$

After replacing symbols, we get

$$112 + 43 - (12 \times 6 + 36) \div 6 - 116$$

$$= 112 + 43 - (72 + 36) \div 6 - 116$$

$$= 112 + 43 - (108) \div 6 - 116$$

$$= 112 + 43 - 18 - 116$$

$$= 155 - 134$$

$$= 21$$

So, the value of the given equation is '21'.

Hence, the correct answer is **21**.

Q:6 The correct answer is **Option 3** i.e. **\div and $+$**

Given the equation: $200 - 600 \times 400 + 800 \div 100$

1. \times and $-$

$$200 \times 600 - 400 + 800 \div 100$$

$$200 \times 600 - 400 + 8$$

$$120000 - 400 + 8$$

$$119600 + 8 = 119608 \neq 0$$

2. $+$ and $-$

$$200 + 600 \times 400 - 800 \div 100$$

$$200 + 600 \times 400 - 8$$

$$200 + 240000 - 8$$

$$240200 - 8 = 240192 \neq 0$$

3. \div and $+$

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$$200 - 600 \times 400 \div 800 + 100$$

$$200 - 600 \times 1/2 + 100$$

$$200 - 300 + 100$$

$$-100 + 100 = 0 = \text{RHS}$$

Since we got our answer, we don't need to check other options.

Thus, \div and $+$ is correct answer.

Q:7 The correct answer is **Option 4** i.e. **66**

$$\$ = +$$

$$\# = -$$

$$@ = \times$$

$$* = \div$$

After changing the sign, we have: **5 @ 11 \$ 12 # 1 * 1**

$$= 5 \times 11 + 12 - 1 \div 1$$

$$= 55 + 12 - 1$$

$$= 66$$

Hence, **66** is the correct answer.

Q:8 The correct answer is **Option 4** i.e. **- , \times , $+$, \div , =**

Given equation: $69 * 23 * 2 * 42 * 2 * 44$

After replacing '*' with the mathematical sign given in Option '1' we get:

$$69 + 23 \times 2 - 42 \div 2 = 44$$

$$69 + 23 \times 2 - 21 = 44$$

$$69 + 46 - 21 = 44$$

$$115 - 21 = 44$$

$$94 \neq 44$$

So, the sign given in Option '1' will not balance the equation.

After replacing '*' with the mathematical sign given in Option '2' we get:

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$$69 \div 23 + 2 \times 42 - 2 = 44$$

$$3 + 2 \times 42 - 2 = 44$$

$$3 + 84 - 2 = 44$$

$$87 - 2 = 44$$

$$85 \neq 44$$

So, the sign given in Option '2' will not balance the equation.

After replacing '*' with the mathematical sign given in Option '3' we get:

$$69 \div 23 \times 2 - 42 + 2 = 44$$

$$3 \times 2 - 42 + 2 = 44$$

$$6 - 42 + 2 = 44$$

$$8 - 42 = 44$$

$$-34 \neq 44$$

So, the sign given in Option '3' will not balance the equation.

After replacing '*' with the mathematical sign given in Option '4' we get:

$$69 - 23 \times 2 + 42 \div 2 = 44$$

$$69 - 23 \times 2 + 21 = 44$$

$$69 - 46 + 21 = 44$$

$$90 - 46 = 44$$

$$44 = 44$$

So, the sign given in Option '4' will balance the equation.

Hence, the correct answer is -, ×, +, ÷, =.

Q:9 The correct answer is **Option 1** i.e. ×, -, ÷, +

Given equation: $26 * 5 * 45 * 9 * 15 = 140$

Option 1: ×, -, ÷, +

After using the signs,

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$$\begin{aligned}26 \times 5 - 45 \div 9 + 15 &= 140 \\&= 130 - 5 + 15 \\&= 145 - 5 \\&= \mathbf{140} \text{ is equal to } 140.\end{aligned}$$

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

Hence, the correct answer is **x, -, ÷, +**.

Q:10 The correct answer is **Option 3** i.e. **3**

Given the equation: $39 - 21 \div 63 + 19 \times 21$

Replacing the signs,

$$\begin{aligned}39 + 21 - 63 \times 19 \div 21 \\&= 39 + 21 - 57 \\&= 3\end{aligned}$$

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

Congratulations on completing 10 Mathematical Reasoning questions of varying difficulty levels. Your dedication to practice is commendable and will undoubtedly enhance your Logical Reasoning skills. Comment your thoughts below and let us know how was your experience practicing these specially curated questions for you. If you have any doubts, you can ask in the comment section and we'll be right there with answers in no time. Keep up the great work, and you'll be well-prepared to tackle similar challenges in the exams. **KD Live** will be here with with top 10 questions from different topics, on a daily basis. Stay tuned!