

[Type the company name]

[Type the document subtitle]



Quiz



BC190401216: ALI HASSNAIN

Time Left 88 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 30 of 30 (Start time: 12:29:33 AM, 10 July 2020)

Total Marks: 1

$a * H = H * a$ relation holds if _____ .

Select the correct option



H is semigroup of an abelian group



H is monoid of a group



H is a cyclic group



H is subgroup of an abelian group

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 88 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 29 of 30 (Start time: 12:28:56 AM, 10 July 2020)

Total Marks: 1

The operation of addition '+' satisfies the commutative property.

Select the correct option

☐ True☐ False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 28 of 30 (Start time: 12:28:17 AM, 10 July 2020)

Total Marks: 1

The set of n n th roots of unity is a cyclic group under

Select the correct option



multiplication



addition



subtraction



none of these

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87
sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 27 of 30 (Start time: 12:27:21 AM, 10 July 2020)

Total Marks: 1

If a, b are the elements of group G , then $(b^{-1}a^{-1})^{-1} =$ _____.

Select the correct option

 Reload Math Equations

- | | |
|-----------------------|-----------|
| ☐ | ab |
| ☐ | ba^{-1} |
| ☐ | $a^{-1}b$ |
| ☐ | $b^{-1}a$ |

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 26 of 30 (Start time: 12:26:18 AM, 10 July 2020)

Total Marks: 1

The inverse permutation of $\begin{pmatrix} 1 & 2 & 3 \\ 3 & 1 & 2 \end{pmatrix}$.

Select the correct option

Reload Math Equations

☐	$\begin{pmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \end{pmatrix}$
☐	$\begin{pmatrix} 1 & 2 & 3 \\ 2 & 1 & 3 \end{pmatrix}$
☐	$\begin{pmatrix} 1 & 2 & 3 \\ 1 & 2 & 3 \end{pmatrix}$
☐	None of these

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 25 of 30 (Start time: 12:25:49 AM, 10 July 2020)

Total Marks: 1

The set $\{1, -1\}$ is a group under _____.

Select the correct option



addition



multiplication



subtraction



division

Click to Save Answer & Move to Next Question



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 24 of 30 (Start time: 12:25:13 AM, 10 July 2020)

Total Marks: 1

If X has 4 elements, then total number of permutations on X is -----.

Select the correct option

Reload Math Equations

- | | |
|-----------------------|-------|
| ☐ | 4^2 |
| ☐ | 4 |
| ☐ | $4!$ |
| ☐ | $4+1$ |

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 75 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 23 of 30 (Start time: 12:24:30 AM, 10 July 2020)

Total Marks: 1

The order of $(1\ 2\ 3)(4\ 5\ 6)$ is _____.

Select the correct option

☐ 2☐ 3☐ 4☐ 5

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 84 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 22 of 30 (Start time: 12:23:39 AM, 10 July 2020)

Total Marks: 1

Subtraction is a binary operation on the set of Real numbers R .

Select the correct option

☐ True☐ False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 21 of 30 (Start time: 12:23:06 AM, 10 July 2020)

Total Marks: 1

The group $(\mathbb{Z}, +)$ is a finite group.

Select the correct option



True



False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 20 of 30 (Start time: 12:22:27 AM, 10 July 2020)

Total Marks: 1

If G is an abelian group and H is subset of G , then $aH = Ha$ for some a in G .

Select the correct option



True



False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 82 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 19 of 30 (Start time: 12:21:40 AM, 10 July 2020)

Total Marks: 1

The identity of the group $\{1, -1, i, -i\}$ is -----.

Select the correct option

- | | |
|-----------------------|----|
| ☐ | 1 |
| ☐ | -1 |
| ☐ | i |
| ☐ | -i |

Click to Save Answer & Move to Next Question



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 17 of 30 (Start time: 12:20:10 AM, 10 July 2020)

Total Marks: 1

If X consists of the elements 1,2,...,7, then the symbol (1,3,4,2,6) means the permutation———.

Select the correct option

Reload Math Equations

- | | |
|-----------------------|--|
| ☐ | $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 6 & 4 & 2 & 5 & 1 & 7 \end{pmatrix}$ |
| ☐ | $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 4 & 3 & 2 & 5 & 1 & 7 \end{pmatrix}$ |
| ☐ | $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 6 & 4 & 5 & 2 & 1 & 7 \end{pmatrix}$ |
| ☐ | None of these |

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 88 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 16 of 30 (Start time: 12:19:23 AM, 10 July 2020)

Total Marks: 1

if $f = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 4 & 1 \end{pmatrix}$ and $g = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 1 & 4 \end{pmatrix}$ are two permutations,

Select the correct option

Reload Math Equations

True



False



Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left

87

sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 15 of 30 (Start time: 12:18:44 AM, 10 July 2020)

Total Marks: 1

Under multiplication, 1 is not an idempotent element

Select the correct option



True



False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 14 of 30 (Start time: 12:18:05 AM, 10 July 2020)

Total Marks: 1

A non-empty set with the _____ binary operation is Semigroup.

Select the correct option

☐ commutative☐ associative☐ distributive☐ None of these

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 13 of 30 (Start time: 12:17:29 AM, 10 July 2020)

Total Marks: 1

A non-empty set with a binary operation is called _____.

Select the correct option



groupoid



semi-group



monoid



group

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87
sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 12 of 30 (Start time: 12:16:52 AM, 10 July 2020)

Total Marks: 1

The set of real numbers is an abelian group under

Select the correct option



addition



multiplication



division



none of these

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 11 of 30 (Start time: 12:16:20 AM, 10 July 2020)

Total Marks: 1

A cycle of length ----- is called the transposition.

Select the correct option



one



two



three



four

Click to Save Answer & Move to Next Question

Question # 10 of 30 (Start time: 12:09:25 AM, 10 July 2020)

Total Marks: 1

Which of the following is non-trivial subgroup of the group $\{1, -1, i, -i\}$?

Select the correct option

- ☐ $\{1\}$
- ☐ $\{i, -i\}$
- ☐ $\{1, -1, i, -i\}$
- ☐ $\{1, -1\}$

[Click to Save Answer & Move to Next Question](#)



Quiz



BC190401216: ALI HASSNAIN

Time Left 83 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 10 of 30 (Start time: 12:09:25 AM, 10 July 2020)

Total Marks: 1

Which of the following is non-trivial subgroup of the group $\{1, -1, i, -i\}$?

Select the correct option

 $\{1\}$  $\{i, -i\}$  $\{1, -1, i, -i\}$  $\{1, -1\}$

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 9 of 30 (Start time: 12:08:39 AM, 10 July 2020)

Total Marks: 1

Every cyclic permutation can be expressed as a _____ of transpositions.

Select the correct option



sum



difference



quotient



product

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 8 of 30 (Start time: 12:08:10 AM, 10 July 2020)

Total Marks: 1

The length of cyclic permutation $\begin{pmatrix} a_1 & a_2 & a_3 \\ a_2 & a_3 & a_1 \end{pmatrix}$ is _____.

Select the correct option

Reload Math Equations

☐	1
☐	2
☐	3
☐	4

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 87 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 7 of 30 (Start time: 12:07:28 AM, 10 July 2020)

Total Marks: 1

The set $G=\{1,-1,i,-i\}$ is a NOT group under multiplication.

Select the correct option



True



False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 6 of 30 (Start time: 12:06:46 AM, 10 July 2020)

Total Marks: 1

Let $H = \{1, -1\}$ and $i \in G$. Then the left coset iH is _____.

Select the correct option

Reload Math Equations

- | | |
|-----------------------|--------------------|
| ☐ | $\{i, -i\}$ |
| ☐ | $\{1, -1, i, -i\}$ |
| ☐ | $\{1, -1\}$ |
| ☐ | $\{-1, i, -i\}$ |

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 88 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 5 of 30 (Start time: 12:06:08 AM, 10 July 2020)

Total Marks: 1

The group $\{1, -1\}$ is subgroup of the group $\{1, -1, i, -i\}$.

Select the correct option



True



False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 4 of 30 (Start time: 12:05:27 AM, 10 July 2020)

Total Marks: 1

The set of natural numbers N starts from 1.

Select the correct option



True



False

Click to Save Answer & Move to Next Question



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 3 of 30 (Start time: 12:04:46 AM, 10 July 2020)

Total Marks: 1

A group G is abelian if and only if $(ab)^2 = a^2 b^2$ for all $a, b \in G$

Select the correct option

Reload Math Equations

☐	True
☐	False

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 86 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 2 of 30 (Start time: 12:03:51 AM, 10 July 2020)

Total Marks: 1

The length of the cyclic permutation

$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 1 & 2 & 4 & 3 & 5 & 6 \end{pmatrix}$$

Select the correct option

Reload Math Equations

☐	2
☐	3
☐	4
☐	5

Click to Save Answer & Move to Next Question



Quiz



BC190401216: ALI HASSNAIN

Time Left 85 sec(s)

MTH405:Grand Quiz

Quiz Start Time: 12:02 AM, 10 July 2020

Question # 1 of 30 (Start time: 12:02:23 AM, 10 July 2020)

Total Marks: 1

Let α and β be two permutation of the group $(S_3, \circ)$, then $\alpha \circ \beta = \beta \circ \alpha$

Select the correct option

Reload Math Equations

True



False



Click to Save Answer & Move to Next Question