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India's Number 1 Education App

## MATHS

## BOOKS - SWAN PUBLICATION

## CONGRUENCE OF TRIANGLES

Exercise 71

1. Identify the pairs of congruent figure and
write the congruence in symbolic form .


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2. Identify the pairs of congruent figure and write the congruence in symbolic form .


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3. Identify the pairs of congruent figure and write the congruence in symbolic form .


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4. Identify the pairs of congruent figure and
write the congruence in symbolic form .


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5. Identify the pairs of congruent figure and write the congruence in symbolic form .

6. Identify the pairs of congruent figure and write the congruence in symbolic form .


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7. If $\triangle P Q R \cong \triangle D M N$ under the correspondence $P Q R \leftrightarrow O M N$ write all the
corresponding congruent parts of the triangle.

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8. Draw any two pairs of congruent triangles.

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9. $\triangle A B C \cong \triangle Z Y X$ write the parts of
$\Delta Z Y X$ that correspond to
$\angle B$
10. $\triangle A B C \cong \triangle Z Y X$ write the parts of $\Delta Z Y X$ that correspond to

CA

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11. $\triangle A B C \cong \triangle Z Y X$ write the parts of
$\Delta Z Y X$ that correspond to
AB

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12. $\triangle A B C \cong \triangle Z Y X$ write the parts of $\Delta Z Y X$ that correspond to
$\angle C$

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13. Multiple choice questions

If $\triangle A B C \cong \triangle X Y Z$ under the
correspondence $A B C \Leftrightarrow X Y Z$ Then
A. $\angle A=\angle Z$
B. $\angle X=\angle B$
C. $\angle A=\angle X$
D. $\angle C=\angle X$

Answer: C

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14. Multiple choice questions

Two line segments are congruent if
A. They are parallel
B. They intersect each other
C. They are part of same line
D. They are of equal length

## Answer: D

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15. Multiple choice questions

Two triangles $\triangle A B C$ and $\Delta L M N$ are
congruent $A B=L M, B C=M N$. If $A C=5 \mathrm{~cm}$. then

LN is :
A. 3 cm
B. 15 cm
C. 5 cm
D. Cann't be defined

Answer: C
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1. Two right angles are always congruent:

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2. Two opposite sides of a rectangle are always congruent.

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Exercise 72

1. In the following pair of triangles examine whether the triangles are congruent or not write the rule of congruence if triangles are congruent.

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2. In the following pair of triangles examine whether the triangles are congruent or not write the rule of congruence if triangles are congruent.


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3. In the following pair of triangles examine whether the triangles are congruent or not write the rule of congruence if triangles are congruent.



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4. In the following pair of triangles examine whether the triangles are congruent or not write the rule of congruence if triangles are congruent.


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5. In the following pair of triangles examine whether the triangles are congruent or not
write the rule of congruence if triangles are congruent.


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6. In the following pair of triangles examine whether the triangles are congruent or not write the rule of congruence if triangles are

## congruent.



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7. In fig $\triangle A M P \cong \triangle A M Q$ Give reason for the followingsteps.

| Steps | Reasons |
| :---: | :---: |
| (1) PM - $\mathrm{Q}^{\text {M }}$ | $\cdots$ |
| (ii) $\triangle \mathrm{PMA}=\angle \mathrm{QMA}$ | $\ldots$ |
| (iii) $\mathrm{AM}=\mathrm{AM}$ | ...). |
|  |  |



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8. In given figure $A B=A C$ and $B D=D C$. Prove
that
$\triangle A B D \cong \triangle A C D$


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9. In given figure $A B=A C$ and $B D=D C$. Prove
that
$\angle B=\angle C$


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10. In the given (figure), $A C=C E$ and $B C=C D$.

Prove that $\Delta A B C \cong \Delta E C D$


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11. In the adjoining figure.


Write three pairs of equal parts in
$\Delta A D C$ and $\Delta C B A$

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12. In the adjoining figure.


Is $\Delta A D C \cong \triangle C B A$ ? Give reasons.

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13. In the adjoining figure.


Is $A D=C B$ ? Give reasons.

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14. In the given figure $P Q$ II $R S$ and $P Q=R S$.

Prove that
$\triangle P O Q \cong \triangle S O R$


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15. In the given figure PQ II RS and $\mathrm{PQ}=\mathrm{RS}$.

Prove that
$\angle P O Q \cong \angle S O R$


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16. In the adjoining figure, $M$ is mid point of $A D$
$\Delta A M B \cong \triangle D M C$.


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17. In the adjoining figure
$S P \perp P Q, R Q \perp P Q$ and $P R=Q S$


Write three parts of equal parts in
$\triangle P Q R$ and $\triangle S P Q$

## D Watch Video Solution

18. In the adjoining figure
$S P \perp P Q, R Q \perp P Q$ and $P R=Q S$


Prove that $\triangle P Q R \cong \Delta Q P S$

## D Watch Video Solution

19. 

In
given
figure
$A B \perp Q R, A C \perp Q P$ and $Q C=Q B$

Prove that
$\angle A Q B=\angle A Q C$


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20. 

given
figure
$A B \perp Q R, A C \perp Q P$ and $Q C=Q B$
Prove that
$\angle A Q B=\angle A Q C$


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21. ASA congruence criterion is same as SAS congruence criterion. (True/False)
22. Two right angles are always congruent:

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23. ' $=$ ' symbol used for congruence of triangles. (True/False)

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Exercise 72 Multiple Choice Questions

1. Which of the following is not a congruence rule
A. ASA
B. SAS
C. SSS
D. AAA

Answer: D

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2. If $\triangle A B C \cong \triangle P Q R$, then the correct statement is,
A. $\angle A=\angle Q$
B. $\angle A=\angle R$
C. $\angle A=\angle P$
D. $A B=Q R$

Answer: C

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3. $\angle A=\angle D, \angle B=\angle E$ and $A B=D E$,
then the $\triangle A B C \cong \triangle D E F$, by the congruence rule
A. SSS
B. ASA
C. SAS
D. RHS

Answer: B

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1. Two angles are congruent if they are:
A. Supplementary angles
B. Complementary angles
C. Linear pair angles
D. Equal in measurement

Answer: D
2. Two figures are congruent if their ......... are equal.
A. Size
B. Measurement
C. Size and measurement

D. None of these

## Answer: C

3. Two circles are congruent if their
A. Radius are equal
B. Have same centre
C. Same centre but different radius
D. None of these

Answer: A
4. $\triangle A B C \cong \triangle P Q R$ then which of the following statement is not true ?
A. $A \leftrightarrow P$
B. $B \leftrightarrow R$
C. $C \leftrightarrow R$
D. $B \leftrightarrow Q$

Answer: B
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5. $\triangle A B C \cong \triangle D E F$ then which of the following statement is true ?
A. $\overline{B C}=\overline{D E}$
B. $\overline{A B}=\overline{E F}$
C. $\overline{A C}=\overline{D F}$
D. $\overline{C A}=\overline{D E}$

Answer: C

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6. If $\triangle D E F \cong \triangle B C A$ then which of the following statement is not true ?

$$
\begin{aligned}
& \text { A. } \overline{E F}=\overline{C A} \\
& \text { B. } \overline{D F}=\overline{B A} \\
& \text { C. } \angle E=\angle B \\
& \text { D. } \angle F=\angle A
\end{aligned}
$$

Answer: C

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7. 



By which criterian is $\triangle A B C$ congruent to
$\Delta R P Q ?$
A. SAS
B. SSS
C. ASA
D. RHS

Answer: B


By which criterian $\triangle A B D$ is congruent to
$\Delta A C D ?$
A. ASA
B. SAS

## C. SSS

D. RHS

## Answer: C

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By whịch criterian $\triangle A O C$ is congruent to
$\triangle B O D$ ?
A. SAS
B. SSS

## C. ASA

D. RHS

Answer: A
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# By which rule $\Delta A D B$ is congruent to $\triangle A D C$ 

?
A. SSS
B. ASA

## C. RHS

D. SAS

## Answer: C

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11. 


$\Delta A B C \cong \Delta F E D$ The measure of $\angle E$ will be:
A. $40^{\circ}$
B. $60^{\circ}$
C. $80^{\circ}$
D. None of these

Answer: B

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12. $\triangle A B C \cong \triangle X Y Z$. If $\mathrm{AC}=7 \mathrm{~cm}, \mathrm{BC}=4 \mathrm{~cm}$
and $A B=5 \mathrm{~cm}$. Then length of $X Z$ will be:
A. 5 cm
B. 4 cm
C. 7 cm
D. None of these

Answer: C

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13. $\triangle A B C \cong \triangle Q P R$ then which of the following is true?
A. $\angle A=\angle P$

$$
\text { B. } \angle B=\angle R
$$

C. $\angle B=\angle P$
D. $\angle B=\angle Q$

## Answer: C

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## Other Important Questions Fill In The Blanks

1. Two line segments are congruent, if they are of
2. The corresponding parts of congruent triangles are always

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3. In an isosceles triangle angles opposite to equal sides are

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4. Symbol used to denote the congruence of two figures is

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5. An isosceles triangle ................ angles equal.

## - Watch Video Solution

6. Two circles are congruent if their

- Watch Video Solution


## 7. Two angles are congruent if they are:

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8. Two rectangles are congruent if they have equal

## (D) Watch Video Solution

## Other Important Questions lii State Whether Following Statements Are True Or False

1. Two angles are congruent if they have equal measure.

## D Watch Video Solution

2. If three angles of one triangle are equal to
corresponding three angles of an other triangle then triangles are congruent.

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3. Two right triangles are congruent if hypotenuse and one side of first-triangle are respectively equal to the hypoteņuse and one corresponding side of the second triangle

## D Watch Video Solution

4. SSA is a congruence criterion

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5. Two triangles are congruent if two sides of one triangle are respectively equal to the two sides of other triangle.

## D Watch Video Solution

6. Two triangles are congruent if two angles
and the included side of one triangle are
respectively equal to the two angles and the included side of the other triangle.

# 7. Two isosceles triangles are always 

## congruent.

## D Watch Video Solution

8. Two equilateral triangles are always

## congruent.

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