



MATHS

BOOKS - SWAN PUBLICATION

CONGRUENCE OF TRIANGLES



1. Identify the pairs of congruent figure and

write the congruence in symbolic form .



2. Identify the pairs of congruent figure and

write the congruence in symbolic form .







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



5. Identify the pairs of congruent figure and

write the congruence in symbolic form .







7. If $\Delta PQR \cong \Delta DMN$ under the correspondence $PQR \leftrightarrow OMN$ write all the



triangle.



 $\angle B$



10. $\Delta ABC \cong \Delta ZYX$ write the parts of

ΔZYX that correspond to

CA



11. $\Delta ABC\cong \Delta ZYX$ write the parts of

 ΔZYX that correspond to

AB





12. $\Delta ABC \cong \Delta ZYX$ write the parts of

ΔZYX that correspond to

 $\angle C$

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13. Multiple choice questions

If $\Delta ABC \cong \Delta XYZ$ under the

correspondence $ABC \Leftrightarrow XYZ$ Then

A. A = Z

 $\mathsf{B}. \angle X = \angle B$

$\mathsf{C}. \angle A = \angle X$

 $\mathsf{D}.\,\angle C=\angle X$

Answer: C



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 ΔABC and ΔLMN are

congruent AB = LM, BC = MN. If AC = 5 cm. then

LN is :

A. 3 cm

B. 15 cm

C. 5 cm

D. Cann't be defined

Answer: C

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Exercise 7 1 True False

1. Two right angles are always congruent:



2. Two opposite sides of a rectangle are always

congruent.



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





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



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



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





5. In the following pair of triangles examine whether the triangles are congruent or not

write the rule of congruence if triangles are

congruent.



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

congruent.



7. In fig $\Delta AMP\cong\Delta AMQ$ Give reason for

the followingsteps.







8. In given figure AB = AC and BD = DC. Prove

that

 $\Delta ABD \cong \Delta ACD$





9. In given figure AB = AC and BD = DC. Prove

that

 $\angle B = \angle C$





10. In the given (figure), AC = CE and BC = CD.

Prove that $\Delta ABC\cong \Delta ECD$





11. In the adjoining figure.



Write three pairs of equal parts in ΔADC and ΔCBA

12. In the adjoining figure.



Is $\Delta ADC\cong \Delta CBA$? Give reasons.

13. In the adjoining figure.



Is AD = CB ? Give reasons.

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14. In the given figure PQ II RS and PQ=RS.

Prove that

$\Delta POQ \cong \Delta SOR$



15. In the given figure PQ II RS and PQ=RS. Prove that

$\angle POQ \cong \angle SOR$





16. In the adjoining figure, M is mid point of AD

and $\angle A = \angle D$. Show that

$\Delta AMB \cong \Delta DMC.$

















Prove that $\Delta PQR\cong\Delta QPS$





 $\angle AQB = \angle AQC$





20. In given figure $AB \perp QR, AC \perp QP$ and QC = QB .

Prove that







21. ASA congruence criterion is same as SAS

congruence criterion. (True/False)

22. Two right angles are always congruent:



Exercise 7 2 Multiple Choice Questions

1. Which of the following is not a congruence

rule

A. ASA

B. SAS

C. SSS

D. AAA

Answer: D

2. If $\Delta ABC \cong \Delta PQR$, then the correct

statement is,

A.
$$\angle A = \angle Q$$

- $\mathsf{B}. \angle A = \angle R$
- $\mathsf{C}. \angle A = \angle P$
- $\mathsf{D}.\,AB=QR$

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Answer: C

3.	$\angle A = \angle$	$\measuredangle D, \measuredangle B = \measuredangle E ext{ and } A$	B = I	DE,
then	the	$\Delta ABC\cong\Delta DEF$,	by	the
congruence rule				
A	. SSS			
В	. ASA			
C	. SAS			
D	. RHS			
Answer: B				

- **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. $\Delta ABC \cong \Delta PQR$ then which of the

following statement is not true ?

 $\mathsf{A}.\,A\,\leftrightarrow\,P$

 $\mathsf{B}.\,B\leftrightarrow R$

 $\mathsf{C}.\,C \leftrightarrow R$

 $\mathsf{D}.\,B\leftrightarrow Q$

Answer: B

5. $\Delta ABC \cong \Delta DEF$ then which of the

following statement is true ?

A.
$$\overline{BC}=\overline{DE}$$

- $\mathsf{B}.\,\overline{AB}=\overline{EF}$
- $\mathsf{C}.\,\overline{AC}=\overline{DF}$

D.
$$\overline{CA} = \overline{DE}$$

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Answer: C

6. If $\Delta DEF \cong \Delta BCA$ then which of the following statement is not true ?

- A. $\overline{EF}=\overline{CA}$
- B. $\overline{DF}=\overline{BA}$
- $\mathsf{C}. \angle E = \angle B$
- D. $\angle F = \angle A$

Answer: C



By which criterian is ΔABC congruent to

ΔRPQ ?

A. SAS

- B. SSS
- C. ASA

D. RHS

Answer: B



By which criterian ΔABD is congruent to ΔACD ?

A. ASA

B. SAS

C. SSS

D. RHS

Answer: C





By which criterian ΔAOC is congruent to ΔBOD ?

A. SAS

B. SSS

C. ASA

D. RHS

Answer: A



By which rule ΔADB is congruent to ΔADC

A. SSS

?

B. ASA

C. RHS

D. SAS

Answer: C





 $\Delta ABC\cong \Delta FED$ The measure of $\angle E$ will be:

 $\mathrm{B.\,60}^{\,\circ}$

C. 80°

D. None of these

Answer: B

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12. $\Delta ABC\cong \Delta XYZ$. If AC = 7 cm, BC = 4 cm

and AB = 5 cm. Then length of XZ will be:

A. 5 cm

B. 4 cm

C. 7 cm

D. None of these

Answer: C

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13. $\Delta ABC\cong \Delta QPR$ then which of the

following is true?

A.
$$\angle A = \angle P$$

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

$$\mathsf{C}. \angle B = \angle P$$

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



3. In an isosceles triangle angles opposite to

equal sides are



4. Symbol used to denote the congruence of

two figures is _____



5. An isosceles triangle angles equal.

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6. Two circles are congruent if their

7. Two angles are congruent if they are:



8. Two rectangles are congruent if they have equal

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Other Important Questions Iii State Whether Following Statements Are True Or False 1. Two angles are congruent if they have equal

measure.

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

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

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4. SSA is a congruence criterion

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



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.



 Two isosceles triangles are always congruent.

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8. Two equilateral triangles are always

congruent.