

BHARATH COACHING CENTRE

7th cbse

Maths

Total: 40

Congruent triangles

Time: 45 mins

SECTION-A

$$1 \times 6 = 6$$

1. If two angles are congruent, their..... are same.
2. By which criterion two triangles cannot be proved congruent?
3. The symbol of correspondence is.....
4. An angle is of 50° then its congruent angle is of.....
5. How many medians can a triangle have?
6. If a $\Delta ABC \cong \Delta PQR$ then AB is equal to

SECTION-B

$$5 \times 2 = 10$$

1. Can two equilateral triangles always be congruent? Give reasons.
2. Without drawing the figures of the triangles, write all six pairs of equal measures in each of the following pairs of congruent triangles.
 - a. $\Delta XYZ = \Delta MLN$
3. Define congruence of triangles.
4. ΔABC is right triangle in which $\angle A = 90^\circ$ and $AB = AC$. The values of $\angle B \wedge \angle C$ will be
5. In a quadrilateral ABCD, $AD = BC$ and $\angle DAB = \angle CBA$. If $\Delta ABD \cong \Delta BAC$. The relation between $\angle ABD \wedge \angle BAC$ is

SECTION-C

$$4 \times 3 = 12$$

1. Prove that in an isosceles triangle, angles opposite to equal sides are equal.
2. By applying congruence rule write what additional information is needed to establish congruence
 - a. $\Delta PQR \cong \Delta FED$ by SAS congruence, $PQ = FE$ and $RP = DF$

- b. $\Delta ABC \cong \Delta RPQ$ by RHS congruence,
 $\angle B = \angle P = 90^\circ \wedge AB = RP$
3. In a square sheet, draw two triangles of equal areas such that
 - a. The triangles are congruent
 - b. The triangles are not congruent
 4. ABCD is a rectangle. AC is a diagonal. By using SSS congruence rule. Show that $\Delta ABC \cong \Delta CDA$.

SECTION-D

$$3 \times 4 = 12$$

1. In ΔABC , medians BD and CE are equal and intersect each other at O. prove that ΔABC is an isosceles triangle.
2. ΔABC is isosceles with $AB=AC$, AD is the altitude from A to side BC. Prove that (i) $\Delta ADB \cong \Delta ADC$
 (ii) $\angle BAD = \angle CAD$
3. ABCD is a rhombus. AC is a diagonal.
 - a. Show three pairs of equal parts giving reasons, in $\Delta ABC \wedge \Delta ADC$
 - b. Is $\Delta ABC \cong \Delta ADC$? Give reason.
 - c. Is $\angle BAC = \angle DAC$? Give reason.