

Triangles

Question 1.

$\triangle ABC = \triangle PQR$, then which of the following is true?

- (a) $CB = QP$
- (b) $CA = RP$
- (c) $AC = RQ$
- (d) $AB = RP$

Answer: (b) $CA = RP$

Question 2.

In $\triangle ABC$ and $\triangle DEF$, $AB = DE$ and $\angle A = \angle D$. Then two triangles will be congruent by SA axiom if:

- (a) $BC = EF$
- (b) $AC = EF$
- (c) $AC = DE$
- (d) $BC = DE$

Answer: (c) $AC = DE$

Question 3.

In a right triangle, the longest side is:

- (a) Perpendicular
- (b) Hypotenuse
- (c) Base
- (d) None of the above

Answer: (b) Hypotenuse

Question 4.

In $\triangle ABC$, if $\angle A = 45^\circ$ and $\angle B = 70^\circ$, then the shortest and the longest sides of the triangle are

respectively,

- (a) BC, AB
- (a) AB, AC
- (c) AB, BC
- (d) BC, AC

Answer: (d) BC, AC

Question 5.

If the altitudes from vertices of a triangle to the opposite sides are equal, then the triangle is

- (a) Scalene
- (b) Isosceles
- (c) Equilateral
- (d) Right-angled

Answer: (b) Isosceles

Question 6.

D is a Point on the Side BC of a $\triangle ABC$ such that AD bisects $\angle BAC$ then:

- (a) $BD = CD$
- (b) $CD > CA$
- (c) $BD > BA$
- (d) $BA > BD$

Answer: (d) $BA > BD$

Question 7.

If $\triangle ABC \cong \triangle PQR$ then which of the following is true:

- (a) $CA = RP$
- (b) $AB = RP$
- (c) $AC = RQ$
- (d) $CB = QP$

Answer: (a) $CA = RP$

Question 8.

If two triangles ABC and PQR are congruent under the correspondence $A \leftrightarrow P$, $B \leftrightarrow Q$, and $C \leftrightarrow R$, then symbolically, it is expressed as

- (a) $\triangle ABC \cong \triangle PQR$
- (b) $\triangle ABC = \triangle PQR$

- (c) $\triangle ABC$ and $\triangle PQR$ are scalene triangles
- (d) $\triangle ABC$ and $\triangle PQR$ are isosceles triangles

Answer: (a) $\triangle ABC \cong \triangle PQR$

Question 9.

If the bisector of the angle A of an $\triangle ABC$ is perpendicular to the base BC of the triangle then the triangle ABC is :

- (a) Obtuse Angled
- (b) Isosceles
- (c) Scalene
- (d) Equilateral

Answer: (b) Isosceles

Question 10.

If $AB = QR$, $BC = RP$ and $CA = QP$, then which of the following holds?

- (a) $\triangle BCA \cong \triangle PQR$
- (b) $\triangle ABC \cong \triangle PQR$
- (c) $\triangle CBA \cong \triangle PQR$
- (d) $\triangle CAB \cong \triangle PQR$

Answer: (d) $\triangle CAB \cong \triangle PQR$

Question 11.

ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB respectively. Then:

- (a) $BE > CF$
- (b) $BE < CF$
- (c) $BE = CF$
- (d) None of the above

Answer: (c) $BE = CF$

Question 12.

Which of the following is not a criterion for congruence of triangles?

- (a) SSS
- (b) SSA

- (c) ASA
- (d) SAS

Answer: (b) SSA

Question 13.

In $\triangle ABC$, if $\angle B = 30^\circ$ and $\angle C = 70^\circ$, then which of the following is the longest side?

- (a) AB
- (b) BC
- (c) AC
- (d) AB or AC

Answer: (b) BC

Question 14.

The angles opposite to equal sides of a triangle are:

- (a) Equal
- (b) Unequal
- (c) supplementary angles
- (d) Complementary angles

Answer: (a) Equal

Question 15.

If ABC is an equilateral triangle, then each angle equals to:

- (a) 90°
- (b) 180°
- (c) 120°
- (d) 60°

Answer: (d) 60°

Question 16.

$ABC \cong \triangle PQR$. If $AB = 5$ cm, and then which of the following is true?

- (a) $QR = 5$ CM, $\angle R = 60^\circ$
- (b) $QP = 5$ cm, $\angle P = 60^\circ$
- (c) $QP = 5$ cm, $\angle R = 60^\circ$
- (d) $QR = 5$ CM, $\angle Q = 60^\circ$

Answer: (b) $QP = 5 \text{ cm}$, $\angle P = 60^\circ$

Question 17.

O is any point in the interior of $\triangle ABC$. Then which of the following is true?

- (a) $(OA+OB+OC) < \frac{1}{2} (AB+BC+CA)$
- (b) $(OA+OB+OC) > (AB+BC+CA)$
- (c) $(OA+OB+OC) > \frac{1}{2} (AB+BC+CA)$
- (d) None of the Above

Answer: (c) $(OA+OB+OC) > \frac{1}{2} (AB+BC+CA)$

Question 18.

It is not possible to construct a triangle when its sides are:

- (a) 6 cm, 7 cm, 7 cm
- (b) 5.4 cm, 2.3 cm, 3 cm
- (c) 8.3 cm, 3.4 cm, 6.1 cm
- (d) 3 cm, 5 cm, 5 cm

Answer: (b) 5.4 cm, 2.3 cm, 3 cm

Question 19.

Two equilateral triangles are congruent when:

- (a) Their areas are proportional
- (b) Their sides are equal
- (c) Their sides are proportional
- (d) Their angles are equal

Answer: (b) Their sides are equal

Question 20.

It is not possible to construct a triangle when the lengths of its sides are

- (a) 4 cm, 6 cm, 6 cm
- (b) 9.3 cm, 5.2 cm, 7.4 cm
- (c) 6 cm, 7 cm, 8 cm
- (d) 5.3 cm, 2.2 cm, 3.1 cm

Answer: (d) 5.3 cm, 2.2 cm, 3.1 cm

Question 21.

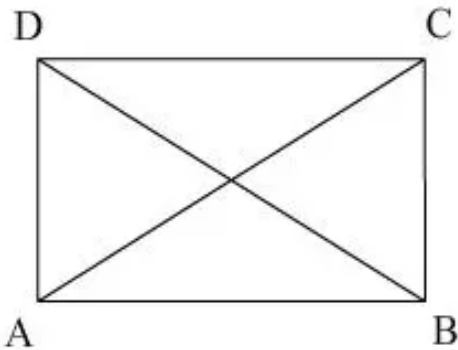
Which of the following statements is incorrect?

- (a) Two squares having the same side length are congruent
- (b) Two rectangles having the same area are congruent
- (c) Two circles having the same radius are congruent
- (d) Two lines having same length are congruent

Answer: (b) Two rectangles having the same area are congruent

Question 22.

ABCD is a parallelogram, if the two diagonals are equal, then by what criterion are the triangles ABD and ABC congruent



- (a) AAS
- (b) SSS
- (c) SAS
- (d) RHS

Answer: (b) SSS
