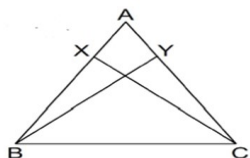


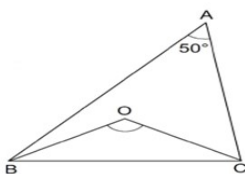
1. **Assertion :** In the adjoining figure, X and Y are respectively two points on equal sides AB and AC of $\triangle ABC$ such that $AX = AY$ then $CX = BY$.

Reason: If two sides and the included angle of one triangle are equal to two sides and the included angle of the other triangle, then the two triangles are congruent



- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 b) both Assertion and reason are correct but reason is not correct explanation for Assertion
 c) Assertion is true but reason is false.
 d) both Assertion and reason are false.
2. **Assertion :** In the given figure, BO and CO are the bisectors of $\angle B$ and $\angle C$ respectively. If $\angle A = 50^\circ$ then $\angle BOC = 115^\circ$

Reason: The sum of all the interior angles of a triangle is 180°



- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 b) both Assertion and reason are correct but reason is not correct explanation for Assertion
 c) Assertion is true but reason is false.
 d) both Assertion and reason are false.
3. **Assertion:** Two angles measures $a - 60^\circ$ and $123^\circ - 2a$. If each one is opposite to equal sides of an isosceles triangle, then the value of a is 61° .
Reason: Sides opposite to equal angles of a triangle are equal.
 a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 b) both Assertion and reason are correct but reason is not correct explanation for Assertion
 c) Assertion is true but reason is false.
 d) both Assertion and reason are false.
4. **Assertion :** In $\triangle ABC$, $\angle C = \angle A$, $BC = 4$ cm and $AC = 5$ cm. Then, $AB = 4$ cm
Reason: In a triangle, angles opposite to two equal sides are equal.
 a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 b) both Assertion and reason are correct but reason is not correct explanation for Assertion
 c) Assertion is true but reason is false.
 d) both Assertion and reason are false.
5. **Assertion:** In $\triangle ABC$, $BC = AB$ and $B = 80^\circ$. Then, $\angle A = 50^\circ$
Reason: In a triangle, angles opposite to two equal sides are equal
 a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 b) both Assertion and reason are correct but reason is not correct explanation for Assertion

- c) Assertion is true but reason is false.
- d) both Assertion and reason are false.

6. **Assertion :** Sides opposite to equal angles of a triangle are equal.

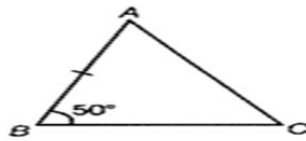
Reason: Angles opposite to equal sides of a triangle are not equal.

- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
- b) both Assertion and reason are correct but reason is not correct explanation for Assertion
- c) Assertion is true but reason is false.
- d) both Assertion and reason are false.

Ans: c) Assertion is correct but reason is false.

7. **Assertion :** In $\triangle ABC$, $AB = AC$ and $\angle B = 50^\circ$, then $\angle C$ is 50° .

Reason: Angles opposite to equal sides of a triangle are equal



- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
- b) both Assertion and reason are correct but reason is not correct explanation for Assertion
- c) Assertion is true but reason is false.
- d) both Assertion and reason are false.

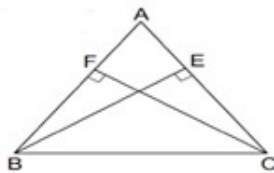
8. **Assertion:** In triangles ABC and PQR, $\angle A = \angle P$, $\angle C = \angle R$ and $AC = PR$. The two triangles are congruent by ASA congruence.

Reason: If two angles and the included side of one triangle are equal to two angles and the included side of the other triangle, then the two triangles are congruent.

- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
- b) both Assertion and reason are correct but reason is not correct explanation for Assertion
- c) Assertion is true but reason is false.
- d) both Assertion and reason are false.

9. **Assertion:** In the given figure, BE and CF are two equal altitudes of $\triangle ABC$ then $\triangle ABE \cong \triangle ACF$

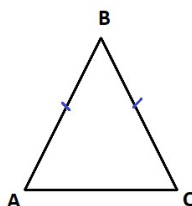
Reason: If two angles and one side of one triangle are equal to two angles and the corresponding side of the other triangle, then the two triangles are congruent.



- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
- b) both Assertion and reason are correct but reason is not correct explanation for Assertion
- c) Assertion is true but reason is false.
- d) both Assertion and reason are false.

10. **Assertion:** In $\triangle ABC$, $\angle A = \angle C$ and $BC = 4$ cm and $AC = 3$ cm then the length of side $AB = 3$ cm.

Reason: Sides opposite to equal angles of a triangle are equal.



- a) both Assertion and reason are correct and reason is correct explanation for Assertion.
 - b) both Assertion and reason are correct but reason is not correct explanation for Assertion
 - c) Assertion is true but reason is false.
 - d) both Assertion and reason are false.
11. For two triangles, if two angles and the included side of one triangle are equal to two angles and the included side of another triangle. Then the congruency rule is:
- a. SSS
 - b. ASA
 - c. SAS
 - d. None of the above
12. A triangle in which two sides are equal is called:
- a. Scalene triangle
 - b. Equilateral triangle
 - c. Isosceles triangle
 - d. None of the above
13. If E and F are the midpoints of equal sides AB and AC of a triangle ABC. Then:
- a. $BF = AC$
 - b. $BF = AF$
 - c. $CE = AB$
 - d. $BF = CE$
14. 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
15. If ABC and DBC are two isosceles triangles on the same base BC. Then:
- a. $\angle ABD = \angle ACD$
 - b. $\angle ABD > \angle ACD$
 - c. $\angle ABD < \angle ACD$
 - d. None of the above

Answer :

1. a 2. a 3. b 4. b 5. a 6. c 7. a 8. a 9. a 10. d 11. b 12. c 13. d
14. c 15. a

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