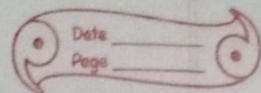


Conceptual Questions



- 1) Yes a triangle can be formed of lengths a, b, c such that $a > b - c$.

By inequality of triangles that sum of two sides is always greater than third side, we can say that

$$a + c > b$$

So, $a > b - c$

Hence, we can form a triangle of lengths a, b, c such that $a > b - c$.

- 2) No, a triangle cannot be formed by line segments $a = b - c$

Given, $a = b - c$

So, $a + c = b$

As this statement contradicts the inequality of triangles that sum of two sides must be greater than third side, therefore we cannot form a triangle of sides a, b, c such that $a = b - c$.

- 3) Same

- 4) Yes in a regular polygon all the exterior angles are equal.

- 5) Yes, the sum of two angles of a triangle can be less than third angle, but it's not always necessary.

- 6) Yes, if all sides of a polygon are equal, then all its interior angle must be equal.
- 7) concyclic
- 8) True
- 9) No, the statement, "two quadrilaterals of equal equal perimetre occupy same area" is not always true i.e it can be true only in some cases.