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.