Ch-6 → Lines and angles

HW 6/8/2021

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WORKSHEET

1) Can a triangle be formed by line segments of lengths a, b and c such that $a > b - c$?

Ans) Yes, a triangle can be formed by line segments of lengths a, b, c such that $a > b - c$.

For example - $a = 15$, $b = 10$, $c = 5$

$15 > 10 - 5$

$15 > 5$

∴ This example proved the statement.

2) Can a triangle be formed by line segments of lengths a, b and c, such that $a = b - c$?

Ans) Yes, a triangle can be formed by line segments of lengths a, b and c, such that $a = b - c$.

For example - $a = 25$, $b = 75$, $c = 50$

$25 \geqslant 75 - 50$

$25 = 25$

∴ This example proved the statement.

3) The areas of parallelograms on the same base and between the same parallel lines are equal in area.

4) In a regular polygon, are all the exterior angles equal?

Ans) Yes

5) Can the sum of the two angles of a triangle be less than the third angle?

Ans) Yes

6) If all the sides of a polygon are equal, then all its interior angles must be equal. Is the given statement true?

Ans) Yes, it is true.

7) If a circle passes through four points then the four points are said to be concyclic.

8) Two circles cannot intersect in more than two points. (True/False)

9) Two quadrilaterals of equal perimeters occupy equal area. Is this statement always true?

Ans) No, it is not always true statement.