Answer on Question #62887 – Math – Analytic Geometry

Question

If a circle of radius 5 was centred on the point C(3,8), if two points on the edge are A(6,4) and B(-1,11): prove that both A and B are points on the edge of the circle.

Solution

The equation of this circle is

$$(x-3)^2+(y-8)^2=25.$$

If A and B are both points on the edge, then their coordinates will satisfy the equation of circle. Substituting the coordinates of A we shall have

$$(6-3)^2+(4-8)^2=9+16=25;$$

$$25=25,$$

which is true.

Therefore, A is indeed a point on the edge of circle.

Substituting the coordinates of A we shall have

$$(-1-3)^2+(11-8)^2=16+9=25;$$

$$25=25,$$

which is true.

Therefore, B is indeed a point on the edge of circle.