

9 A circle has centre at the point $B(5, 1)$. The point $A(-1, -2)$ lies on the circle.

(a) Find the equation of the circle.

[3]

[illegible]

Point C is such that AC is a diameter of the circle. Point D has coordinates $(5, 16)$.

(b) Show that DC is a tangent to the circle.

[4]

[illegible]

The other tangent from D to the circle touches the circle at E .

(c) Find the coordinates of E .

[2]

[illegible]