

10 The equation of a circle is $x^2 + y^2 - 4x + 6y - 77 = 0$.

(a) Find the x -coordinates of the points A and B where the circle intersects the x -axis. [2]

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and run across the entire width of the page. There is no text or other markings on the paper.

(b) Find the point of intersection of the tangents to the circle at A and B . [6]

[illegible]

