



The diagram shows the circle with equation  $(x - 4)^2 + (y + 1)^2 = 40$ . Parallel tangents, each with gradient 1, touch the circle at points  $A$  and  $B$ .

- (a) Find the equation of the line  $AB$ , giving the answer in the form  $y = mx + c$ . [3]

[illegible]

(b) Find the coordinates of  $A$ , giving each coordinate in surd form.

[4]

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(c) Find the equation of the tangent at  $A$ , giving the answer in the form  $y = mx + c$ , where  $c$  is in surd form.

[2]

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