2 Solve the inequality $(3-x)(5x+8) \geqslant 9-3x$. [4]

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3 Point A has coordinates $(3, -1)$.

A circle has equation $(x-4)^2+(y+3)^2=5$.

(a) Show that A lies on the circumference of the circle. [1]

(b) Given that AB is a diameter of the circle, find the coordinates of B. [2]

(c) Find the equation of the tangent to the circle at A. [3]