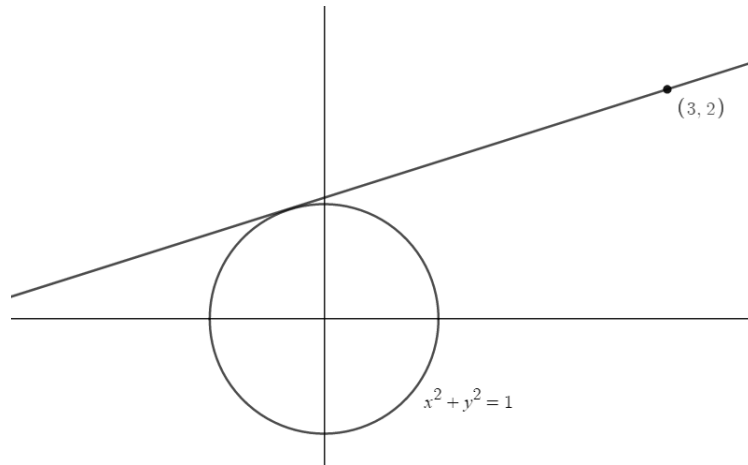


The diagram shows a circle with equation $x^2 + y^2 = 1$ and a tangent to the circle.

The tangent passes through the point $(3,2)$.

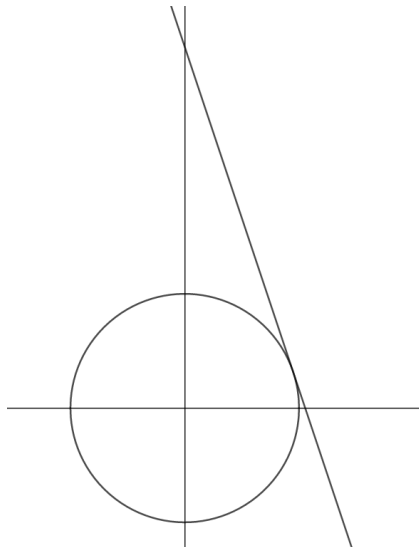
What is the equation of the tangent?



The diagram shows a circle, centre $(0,0)$.

The straight line has equation $y = 3 - 2x$ and is a tangent to the circle.

Find the equation of the circle.



What is the equation of the circle if the equation of the tangent is $y = mx + c$?