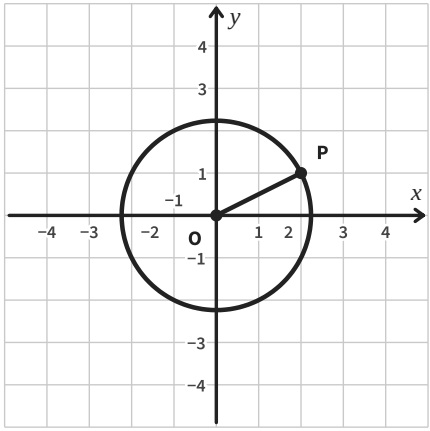
Equation of a tangent to a circle *lesson handout*

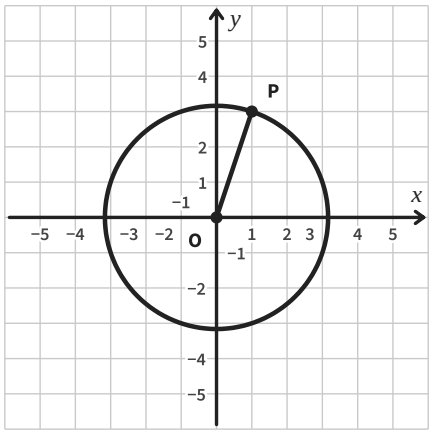
Show why

Draw the tangent at P. Find the gradient of OP and of the tangent.



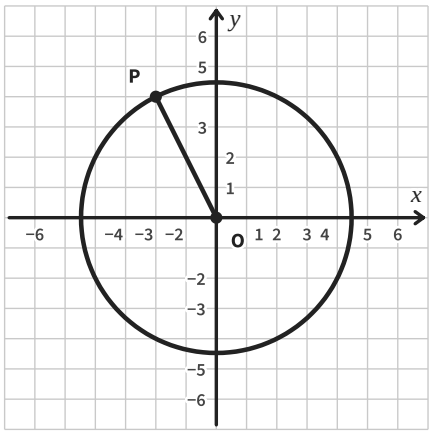
We do

P (1, 3) is on the circle $x^2 + y^2 = 10$. Find the gradient of the radius OP, then of the tangent at P.



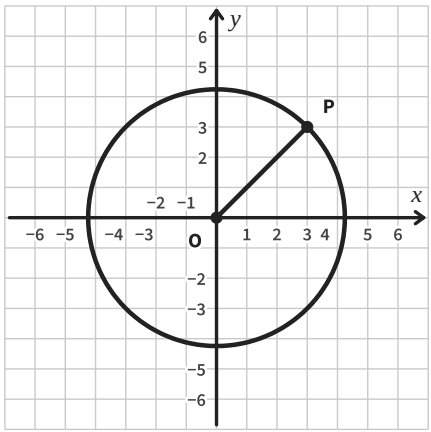
You do

P (−2, 4) is on the circle $x^2 + y^2 = 20$. Find the gradient of the radius OP, then of the tangent at P.



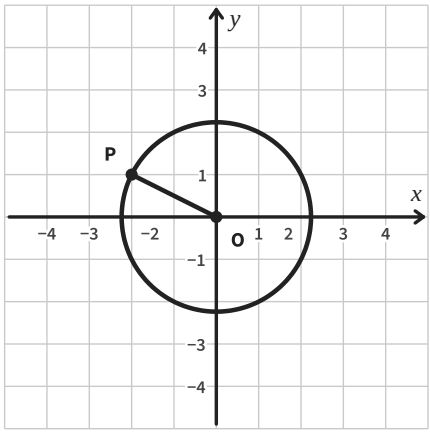
We do

P (3, 3) is on the circle $x^2 + y^2 = 18$. Find the equation of the tangent at P.



You do

P (−2, 1) is on the circle $x^2 + y^2 = 5$. Find the equation of the tangent at P.



Always, sometimes or never?

Draw some tangents to test each statement.

