

## MCS21 Homework 29

Use implicit differentiation to find  $\frac{dy}{dx}$  in terms of  $x$  and  $y$ .

1.  $x^2 + y^2 = 100$

2.  $3x^2 - 4y^3 = 7$

3.  $x^3 + xy - 2x = 1$

4.  $(5y^2 + 1)^2 = 3x^2$

5.  $7y^4 + \cos y = x^3$

6.  $y \sin x - x^4 = 5y$

7.  $\tan(xy) = 8x$