

# Bilkent University <br> Department of Mathematics 

## Problem Of The Month

Term: February 2017

Find the greatest real number $M$ such that

$$
\left(x^{2}+y^{2}\right)^{3} \geq M\left(x^{3}+y^{3}\right)(x y-x-y)
$$

for all real numbers $x, y$ satisfying $x+y \geq 0$.

