**Bilkent University**
**Department of Mathematics**

# Problem Of The Month

**Term:** November 2005

Find all triples of natural numbers $a, b$, and $c$, such that

$$ab + c = (a^2, b^2) + (a, bc) + (b, ac) + (c, ab) = 239^2$$

where $(n, m)$ denotes the greatest common divisor of natural numbers $n$ and $m$.