

## Reliability in Computing: Rump's Problem

Evaluate the expression

$$f(x, y) = 333.75y^6 + x^2(11x^2y^2 - y^6 - 121y^4 - 2) + 5.5y^8 + x/(2y)$$

for  $x = 77617$  and  $y = 33096$ . Compare your results using single precision, double precision and extended precision. Which result is the correct answer? Please specify the computer model (or calculator) that you used in these calculations.