Problem Set 2

September 16, 2024

Problem 1. Prove that, for any prime number $p > 2$, $p \mid \binom{p}{2}$.

Hint: use the binomial theorem $\binom{n}{k} = \frac{n(n-1)\cdots(n-k+1)}{k!}$.

Problem 2. Use the Euclidean algorithm to find the greatest common divisor for 100 and 72.