MATH 467 FACTORIZATON AND PRIMALITY TESTING, FALL TERM 2024, PRACTICE EXAM 1.

Note: Exam 1 will be 9:05-9:55, Wednesday 25th September 2024
Room 012 Walker

1. (25 marks) Show that $n|(n-1)!$ for all composite $n > 4$.

2. (25 marks) Prove that if $m \in \mathbb{N}$ and $n \in \mathbb{N}$, then there are integers a, b such that $\gcd(a, b) = m$ and $[a, b] = n$ if and only if $m|n$.

3. (25 marks) Factorise 4087.

4. (25 marks) Find x and y such that $922x + 2163y = \gcd(922, 2163)$.