

Name:

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1. [10pts] (a) Use the Euclidean algorithm to find  $\gcd(78, 208)$ .  
(b) Find the smallest prime divisor of 2717.

2. [10pts] Let  $n \in \mathbb{N}$ . Prove that if  $\gcd(4, n) = 2$ , then  $n = 2k$  for some odd integer  $k$ .