Tutorial 7

CSCI2110/MATH2080: Discrete Mathematics

4.3 - Primes and Greatest Common Divisors

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Question 1 - Product of Three Consecutive Integers

(Rosen 49/290) Prove that the product of any three consecutive integers is divisible by 6.

Question 2 - Euclidean Algorithm

(Rosen 32/289) Use the Euclidean algorithm to find the following greatest common divisors:

1. $(1, 5)$
2. $(100, 101)$
3. $(123, 277)$
4. $(1529, 14039)$
5. $(1529, 14038)$
6. $(11111, 111111)$

Question 3 - Prime Factorizations

(Rosen 4/288) Find the prime factorizations of each of these integers.

1. 39
2. 81
3. 101
4. 143
5. 289
6. 899