

Assignment 2

Describe all processes in detail. (풀이 과정을 상세히 기술하세요)

1. We choose primes $p=19$, $q=29$, and $n=37$. Encrypt 234 using the public key (z, n) (Do not use calculator) (1 point)
2. Susan purchased computers from A, B, and C, respectively 550ea, 100ea, and 350ea. Defective rate of computers from A, B, and C are 1%, 3%, and 3%, respectively.
 - 2-1) What is the probability that the computer was bought from A when it is defective? (0.2 points)
 - 2-2) What is the probability that the computer was bought from B when it is defective? (0.2 points)
 - 2-3) What is the probability that the computer was bought from C when it is defective? (0.2 points)
3. Find particular solution of the linear nonhomogeneous recurrence relations of $a_n = 7a_{n-1} - 10a_{n-2} + 16n$ where $a_0 = 1, a_1 = 1$ (1점)
4. Professor Euclid is paid biweekly, so the professor is at least paid $365/14$ times. So at least 26 payments occur in a year. There are 12 months in a year, so $26/12 = 2.167$. There must be some month that includes 3 payments, since when payments twice a month are evenly distributed at best, 2 payments must be allocated in some month. (0.6 points)
5. Exercises
 - 5-1) #2 in 8.4 Exercises (0.4 points)
 - 5-2) #4 in 8.7 Exercises (0.4 points)