Task 1 in discrete math:

s is your student number.

T = s mod 100.

e = s mod 8.

m4 = s mod 4.

Sets:

1. How many subsets are there in a set of T elements?

Logic:

2. Give truth table for

m4 = 0: NOT

m4 = 1: AND

m4 = 2: OR

m4 = 3: implication

Proofs:

3. Prove $\sum\_{i=0}^{T}b^{i}=\frac{1-b^{T+1}}{1-b}$.

Relations:

4. Binary relation R on the set {1 to e+2} is defined so that *a*R*b* holds if and only if *a* divides *b*, with remainder. Find the matrix and draw the graph.

Is it reflexive, symmetric, anti-symmetric, transitive, composite?

Project:

5. Start doing your project.