1. I need you to remember the following string: JFMAMJJASOND.

   - How should you remember this? There is JASOND in the end, so that is easier.
   - Why should you know this? Is it enough to learn this string by heart or should you be able to use it? What does it mean to use it?

     What does it mean to use knowledge in programming? Is it useful to know by hear how to write a for loop or is it better to know how to use it to output first 99 numbers?

2. Talking about Test 2. How does the previous problem apply to learning linear algebra?

3. Fibonacci – how to compute F_n fast?

4. What is the matrix of the linear transformation where $f((1,2)^T) = (3,4)^T$ and $f((1,1)^T) = (4,3)^T$?

5. What is the matrix of first derivatives of polynomial with degree at most five?

6. Are there linear maps f_0, f_1, f_2, f_3 such that:

   - f_0 is injective and surjective,
   - f_1 is not injective but is surjective,
   - f_2 is injective but not surjective,
   - f_3 is not injective and not surjective?