Hint 2

1. We added timecodes to the video about math.

2. *(0 points)* Find four different complex numbers, the absolute value of which is equal to one.

3. *(0 points)* The matrix
$$R = \begin{pmatrix} 0{,}995185 & -0{,}0980171 \\ 0{,}0980171 & 0{,}995185 \end{pmatrix}$$
rotates a vector by $\pi/32$ in the counterclockwise direction. How many times should you act with it in order to get the vector $\begin{pmatrix} 0 \\ 1 \end{pmatrix}$ from the vector $\begin{pmatrix} 1 \\ 0 \end{pmatrix}$?

4. We recorded an example of solution for several points, in which we don't write a single line of code.

5. *(0 points)* A ball of mass m moves with velocity v_0 at $45\,^\circ$ to the wall and collides with it inelastically. The time, for which the collision lasts is τ. Find the average force acting on the wall and it's direction.

6. *(0 points)* Let the light normally fall on a flat surface. The radiation power per unit area is equal to I. What is the direction of the force that acts on the surface?