**Introduction to knot theory. Practice quiz.**

Mark the squares that are followed by correct statements.

☐ Any knot in $\mathbb{S}^3$ bounds an unorientable surface.

☐ Any two-component link with the linking number 0 is a split link.

☐ The only knot which has the trivial Alexander polynomial is the unknot.

☐ There exists a knot with the Alexander polynomial $t - 2 + t^{-1}$.

☐ The Alexander polynomial of the connected sum of two knots is the product of their Alexander polynomials.

☐ If a knot has Alexander polynomial $t^2 - 2t + 3 - 2t^{-1} + t^{-2}$, then its genus is at least 2.

☐ If $K = K\#K$, then $K$ is the trivial knot.

☐ A knot can have the Seifert matrix of size $4 \times 4$ with all entries being 0.

☐ Any oriented link in $\mathbb{S}^3$ bounds a connected orientable surface.

☐ For any Seifert surface $F$, the first homology group $H_1(\mathbb{S}^3 \setminus F, \mathbb{Z})$ is a free abelian group.

☐ Any link diagram $D$ can be turned into the diagram of an unlink by reversing several crossings, if necessary.

☐ The 0-th homology group $H_0(F, \mathbb{Z})$ of any surface $F$ is isomorphic to $\mathbb{Z}$.