1) Evaluate $(cos(\frac{\pi}{6}) + isin(\frac{\pi}{3}))^8$

2) Show that the two triangles *ABC* and *DEF* are similar iff the determinant of $\begin{pmatrix} A & D & 1 \\ B & E & 1 \\ C & E & 1 \end{pmatrix} = 0.$

3) Evaluate $\Sigma\binom{n}{4k}$ where $\binom{n}{k}$ represents a binomial coefficient.