Starred Theorems

for Math 210 Exam 3

1. Pythagorean Theorem: Let $\mathbf{u}$ and $\mathbf{v}$ be orthogonal vectors in $\mathbb{R}^n$. Then
   $\|\mathbf{u}\|^2 + \|\mathbf{v}\|^2 = \|\mathbf{u} + \mathbf{v}\|^2$

2. The distance D between the point (x_0, y_0, z_0) and the plane $ax + by + cz + d = 0$ is given by
   $$D = \frac{|ax_0 + by_0 + cz_0 + d|}{\sqrt{a^2 + b^2 + c^2}}.$$

3. Let A be an $m \times n$ matrix and B be an $n \times p$ matrix. Then $T_A \circ T_B = T_{AB}$.

4. If A is an invertible $n \times n$ matrix then T_A has an inverse.