Math 250B. Homework #4
Due Friday 21 February, in class

1. Exercise 2.10 of Eisenbud (page 80).

2. Let \( m \) be a maximal ideal of a ring \( R \). Show that for all \( n \in \mathbb{N} \) the natural map

\[
R/m^n \to R_m/(mR_m)^n
\]

is an isomorphism (of rings).