Worksheet 14: More about factorization

1. Let $R$ be an integral domain and $a, b \in R$ nonzero. Show that if $a$ divides $b$ then $(b) \subseteq(a)$.
2. Let $R$ be a principal ideal domain. Show that any nonzero element $q \in R$ is irreducible if and only if $(q)$ is a maximal ideal.
