

Name:

Problem 1: *For each of the following statements, please write if it is true or false. You do not need to justify.*

a) *Every Euclidean Domain is a Principal Ideal Domain.*

True

b) *Every Unique Factorization Domain is a Principal Ideal Domain.*

False, it's the other way around: Every PID is UFD.

c) *Every Euclidean Domain is a Unique Factorization Domain.*

True, since every Euclidean Domain is a PID and every PID is a UFD, it follows that every Euclidean Domain is a UFD.