Mathematical Physics — PHZ 3113
Classwork 12 (April 3, 2013)
Jacobi Determinant

In the following assignments you are requested to write down all elements of the Jacobi determinant first and NOT to shortcut to the final result (what would be legitimate when it is needed in some other calculations).

1. Calculate the Jacobi determinant for the transformation from Cartesian to cylindrical coordinates.

2. Calculate the Jacobi determinant for the transformation from Cartesian to spherical coordinates.