

## Homework 5

### Geology 3063

October 27, 2000

***This type of problem will be on the test!***

1. Calculate the force at the base of a continental block that has a uniform thickness of 25km, a length of 1000km, a width of 500km, and a density of  $2.70 \frac{g}{cm^3}$ . What is the stress on the bottom of the block?
2. Use the following diagram to:
  - a) Determine the stress acting on the vertical faces of the cube.
  - b) Determine the stress acting on a horizontal plane in the cube.

Assume that the cube is solid, does not deform, and has a dimension of 10cm on a side. Ignore atmospheric pressure in your calculations.

