Homework #1 , F 2009 due Sept. 2 by 7.30 .am.

Please submit paper copies.

All work should be shown and typed.

Please, do not submit the homework

via e-mail.

Using Excel, Matlab, Maple or just a text editor, find the following parameters:

Bulk modulus

Shear Modulus

Bulk density

For

(a) air

(b) water (fresh or salty)

(c) glass

(1) Assuming solid, elastic conditions, calculate *Vs* and *VP*

(2) Just using the equation describe in words and mathematically, how density and velocity vary with respect to each other.

(3) Plot *Vs* and *VP* versus density (on the X-axis)

(4) From the plot describe in words how density and velocity vary with respect to each other.

(5) Explain the difference between your responses to (2) and (3)

Comments: Year 2009

Velocity varies inversely with the square root of the density.

Cite sources. Note that a web references should be verified by finding 3 sources for the same information.

**Best answer was by Guofeng Yuan - 100**