CONSIDER A P-WAVE FROM AN EXPLOSION IN THE RED SEA INCIDENT WITH i = 20 AT THE SEA FLOOR. ASSUME Vp = 5000 M/ SEC. IN THE SEA FLOOR IN THE SEDIMENTS BELOW THE SEA FLOOR THE Vp = 10000 M/ SEC. AND Vs = 7000 M/SEC.

a. DRAW THE RAY PATH FOR EACH WAVE AND LABEL EACH RAY.

b. HOW MANY WAVES WILL BE PRODUCED BY THE INTERACTION OF P-WAVE WITH THE INTERFACE. WHAT ARE THEY ?

c. CALCULATE ALL THE TRANSMITTED AND REFLECTED ANGLES

d. IF THE DENSITY OF SEA FLOOR 1.2 G/CC AND FOR THE SEDIMENTS 1.5 G/CC. COMPUTE THE REFLECTED AND TRANSMITTED COEFFICIENTS AND THE AMOUNT OF REFLECTED AND TRANSMITTED ENERGY.