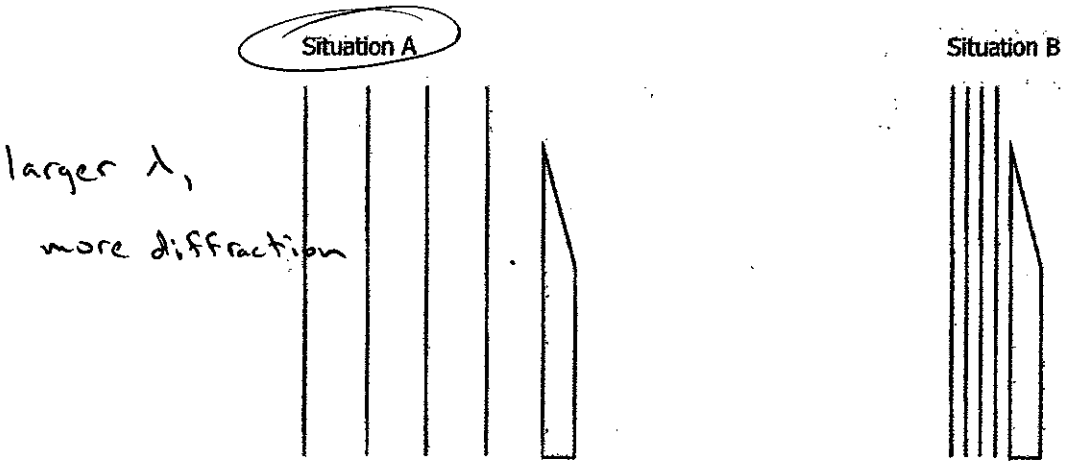
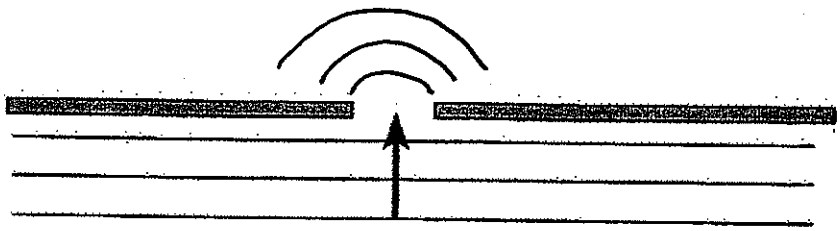
Waves Worksheet #7

1. The diagram below shows two different types of water waves approaching a sharp edge. Which type of wave will show the greatest diffraction: the waves in situation A or the waves in situation B?

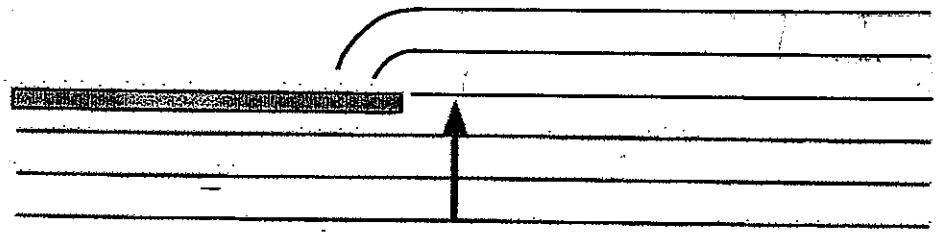


2. Draw the diffraction pattern for the following situations involving waves in a ripple tank:

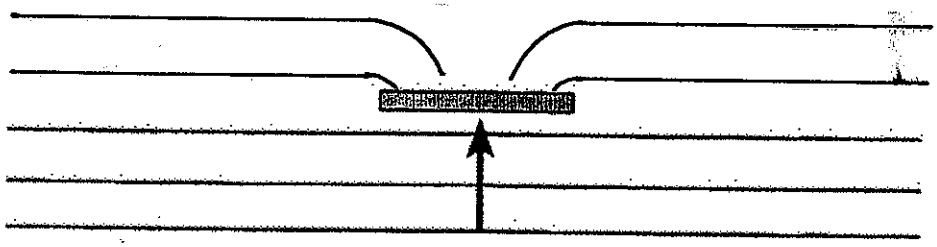
a)



b)



c)



③ 200 m (larger λ = more diffraction)

④ $\lambda_1 = \frac{v_1}{f_1}$ $\lambda_2 = \frac{v_2}{f_2}$

$= \frac{340}{294}$ $= \frac{340}{392}$

$\lambda_1 = 1.16$ m $\lambda_2 = 0.87$ m

D note will diffract more since it has the larger λ. This will make it easier to hear clearly.

⑤ 610 nm, since it has the larger λ.