Lab 24, Waves, Ripple Tank Action

Name _____ Period ____

Purpose: To investigate the properties of waves in water.
1. Fill tank to the plastic frame with tap water (1cm deep).
2. Use a pencil for a point source wave generator.
3. Use a metal bar for a wave front generator.
4. Sketch the pattern of waves observed from a
   a) point source.
   b) wave front.
5. Sketch the pattern of wave interaction from a double point source.
6. Repeat the above with different frequencies.
7. Repeat the above with different amplitudes.
8. Reflection:
Sketch the patterns of a wave front reflected from
   a) plane reflector
   b) concave reflector.
   c) convex reflector.
9. Refraction:
Sketch the wave interactions with a shallow place (glass plate) with
   a) a direct hit.
   b) an angle attack.
10. Repeat with a different
   a) frequency
   b) amplitude.
11. Diffraction:
Sketch the wave action with a
   a) single slit
   b) double slit
12. Repeat with different
   a) frequency
   b) amplitude
13. Doppler Effect by moving
   a) the source
   b) the reflector.
14. The Grand Critique of wave interactions.