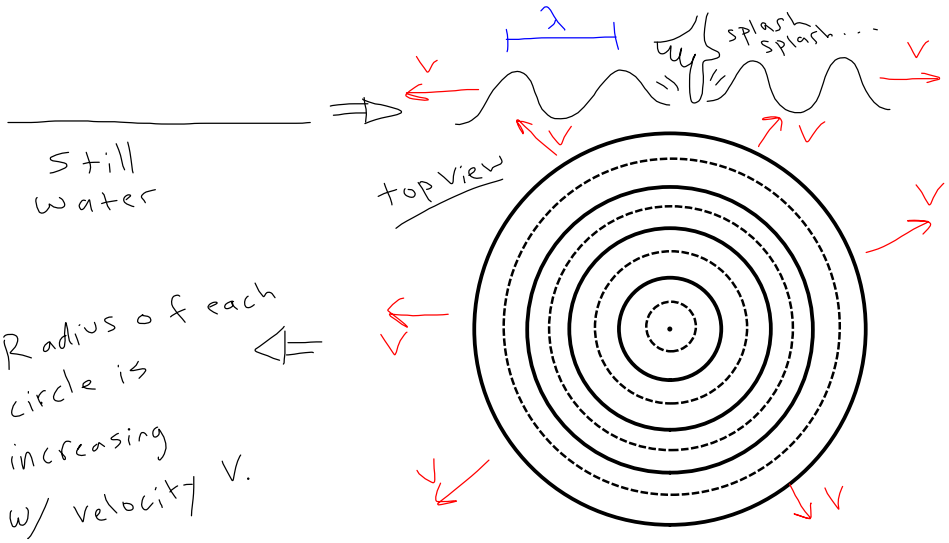
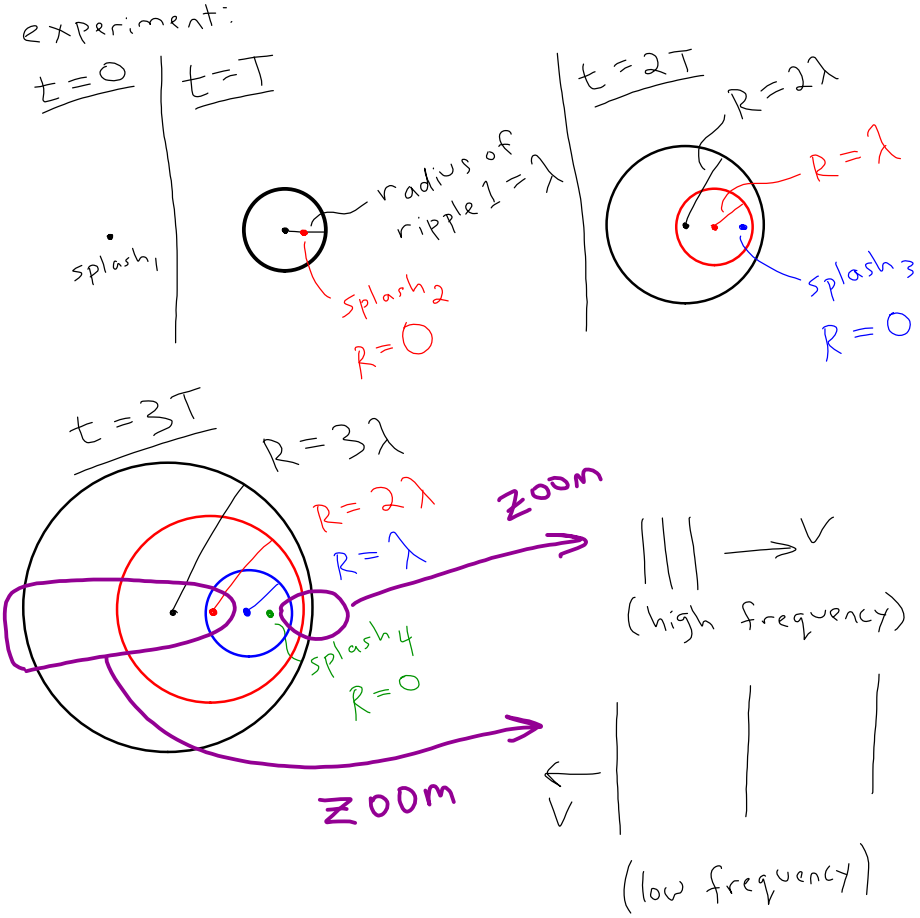


Is it possible to make the ripples travel faster?

NO!

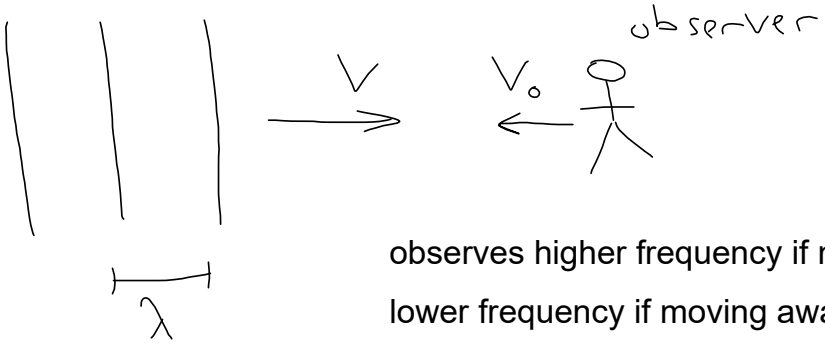


3 velocities:

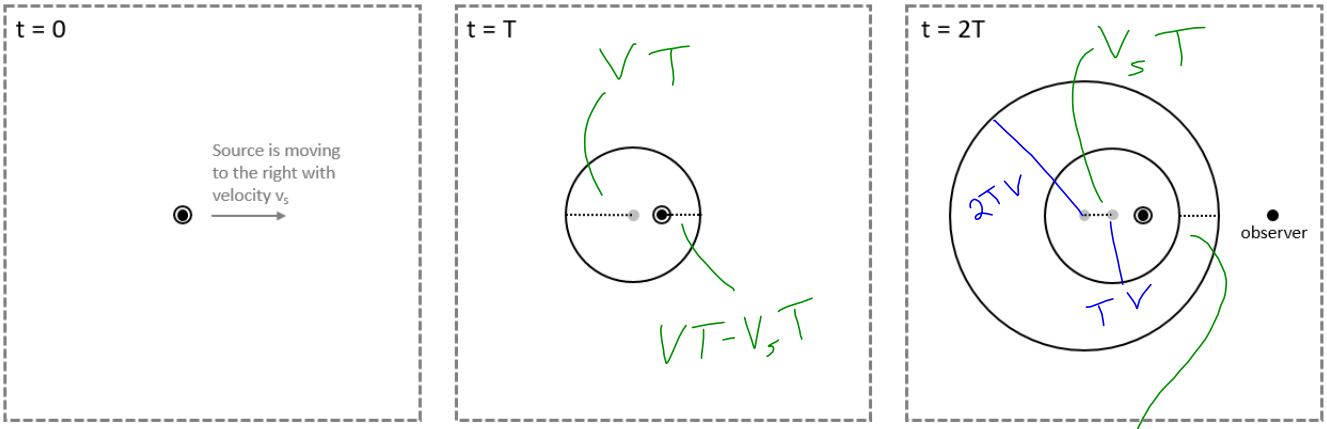
V = speed of wave

V_s = velocity of the source

V_o = velocity of observer



observes higher frequency if moving towards wave, lower frequency if moving away



In terms of the wave propagation velocity, v, the velocity of the source, v_s, and the period of the source T:
- Write down the lengths of the 4 black dashed lines
- Use these values to write down the time interval, T', between wave fronts measured by the observer

$$T' = \frac{VT - V_sT}{V}$$ (stationary observer)

$$T' = \frac{VT - V_sT}{V + V_o}$$ (moving observer (towards wave))