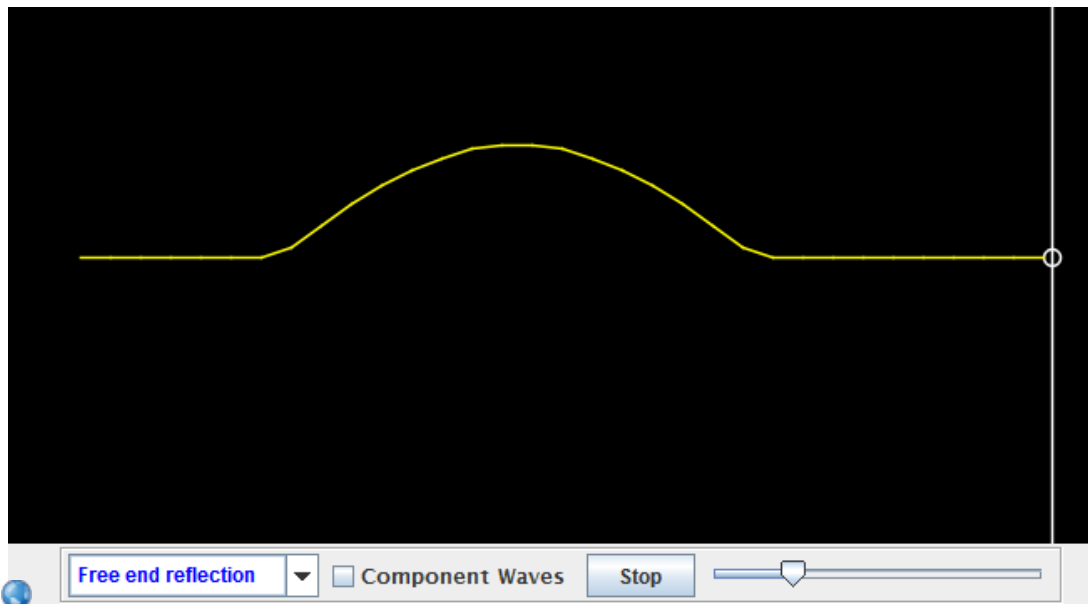


# Wave Transmission & Reflection:

## Waves at Boundaries

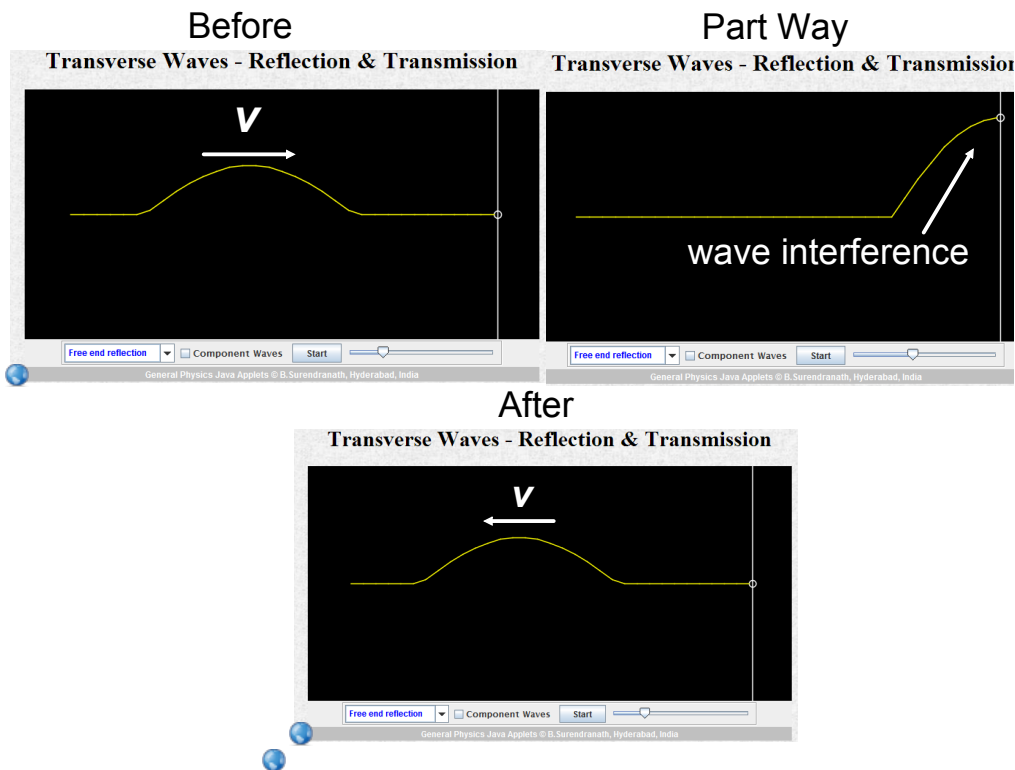
- When a wave moves from one medium to another its frequency remains constant.
- The other quantities change and how they change depends on the properties of the medium.
- The frequency of a wave is totally depended on the source of vibrations and cannot be changed during propagation.



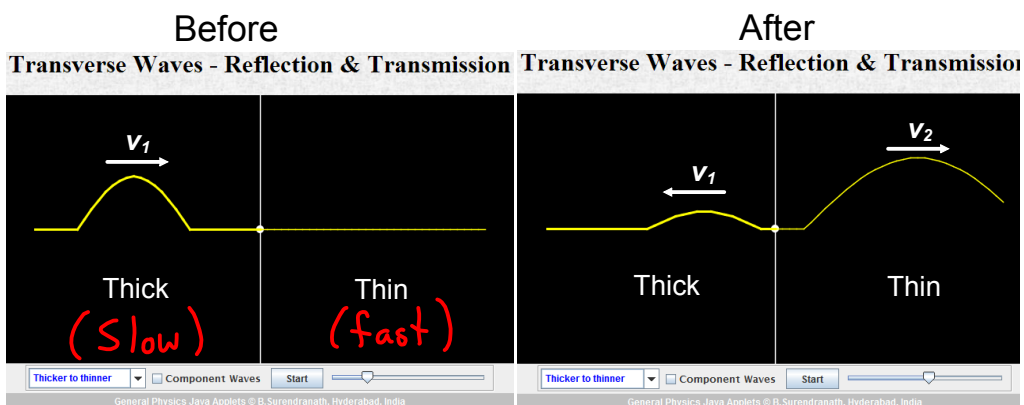
- Explore free and fixed-end reflection.
- Qualitative analysis of waves traveling into a different medium.

**Close Read MHR page 351 - 352, concept questions page 352 #'s 1 & 2.**

### Free-End Reflection Review



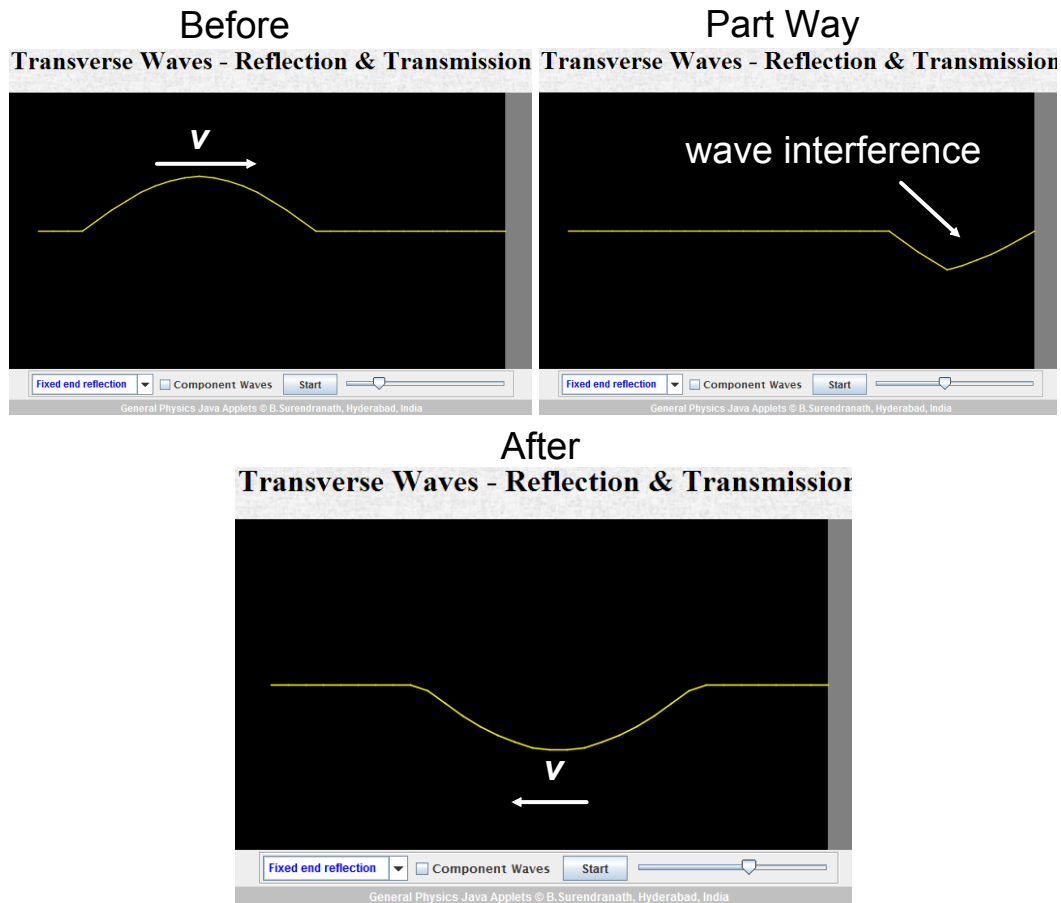
### Wave Transmission



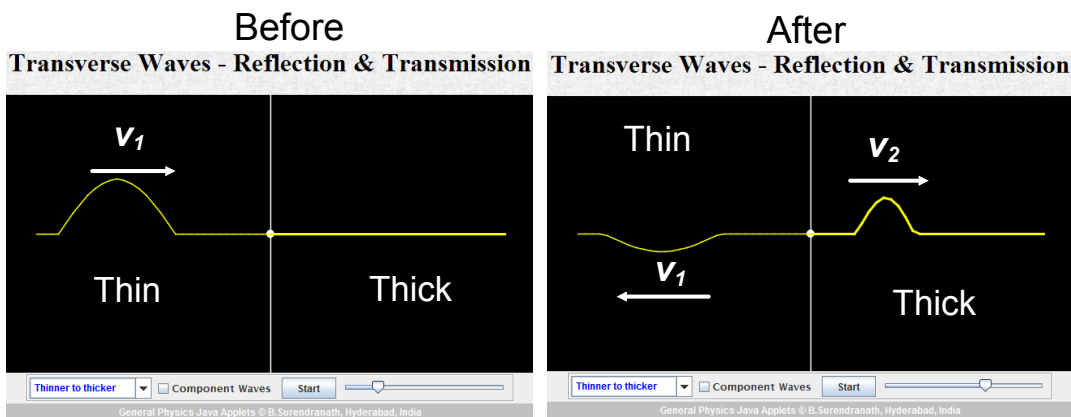
$$v_2 > v_1$$

- Boundary acts like free-end reflection.
- Reflected wave is same orientation and properties (except amplitude) as original.
- Transmitted wave is always the same orientation, frequency and period as original.

## Fixed-End Reflection Review



## Wave Transmission



$$v_1 > v_2$$

- Boundary acts like a fixed end.
- Reflected wave is inverted with a smaller amplitude with the other properties remaining constant.
- Transmitted wave is the same orientation, frequency and period as original.