

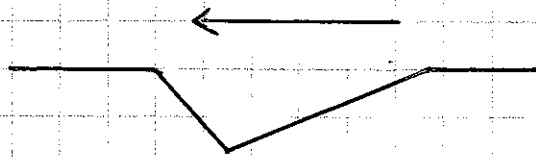
Waves Worksheet #2

- ① Since the returning pulse is inverted, it must have reflected from the boundary between a fast medium and a slow medium.

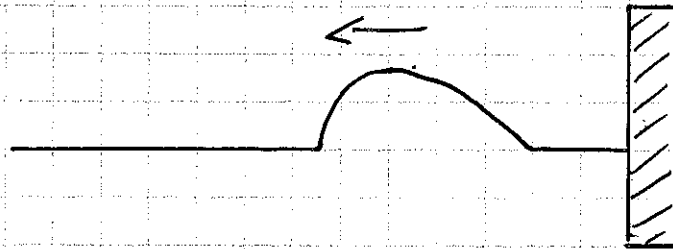
(see picture on top of page 3 of your notes)

∴ slower

- ② Free end, ∴ reflected pulse should be upright, same amplitude, same length.

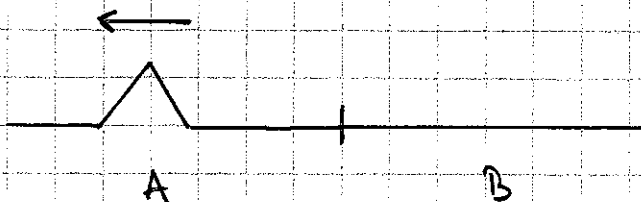


- ③ Fixed end, ∴ reflected pulse should be inverted, same amplitude, same length.



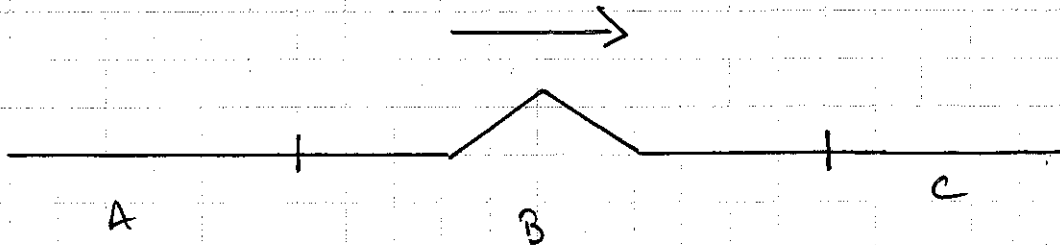
- ④ a) a \rightarrow b is slow \rightarrow fast

∴ reflection should be upright, smaller amp., same length.



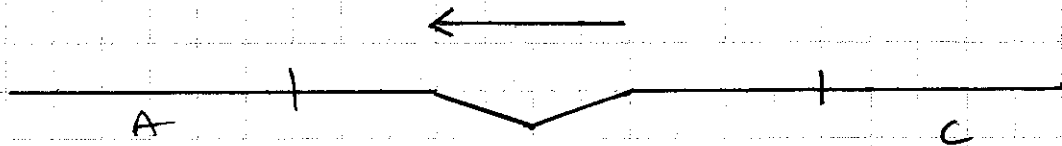
④ b) $a \rightarrow b$ is slow \rightarrow fast

∴ transmitted pulse should be upright,
smaller amp., longer length.



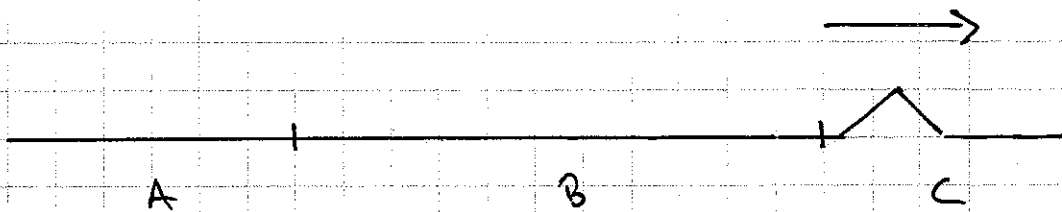
c) $b \rightarrow c$ is fast \rightarrow slow

∴ reflected pulse should be inverted,
smaller amp., same length



d) $b \rightarrow c$ is fast \rightarrow slow

∴ transmitted pulse should be upright,
smaller amp., shorter length



⑤ heavy \rightarrow light = slow \rightarrow fast

∞ Reflected

- upright
- smaller amp
- same λ

Transmitted

- upright
- smaller amp
- longer λ

