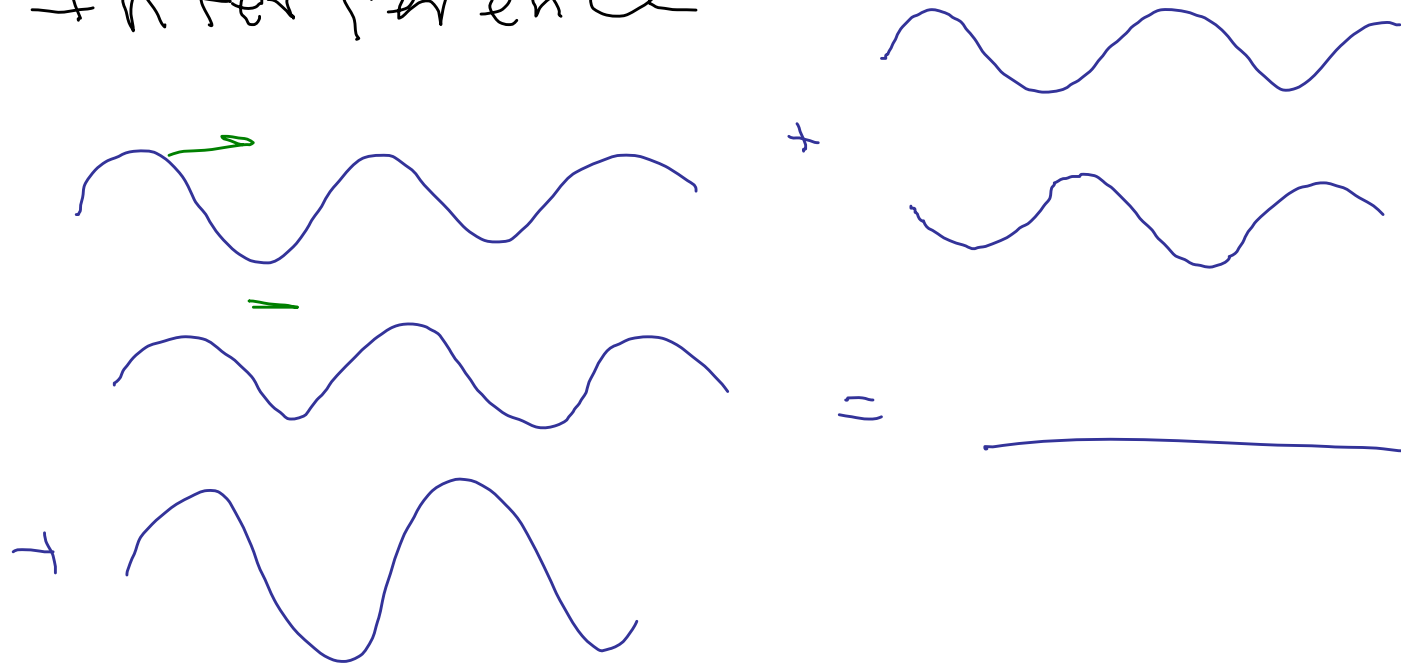


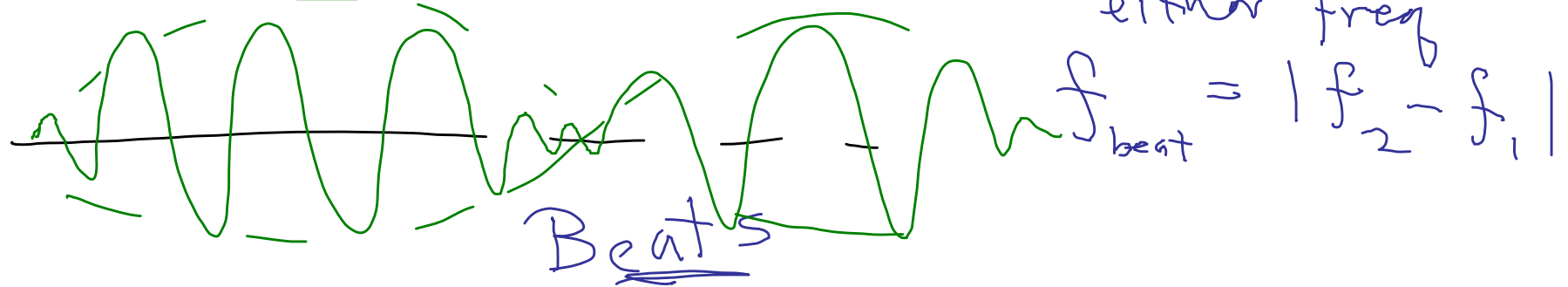
Interference



Add two waves together
Same dir, same speed slightly diff.

λ 's & f 's

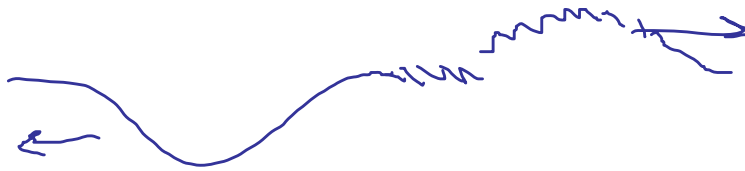
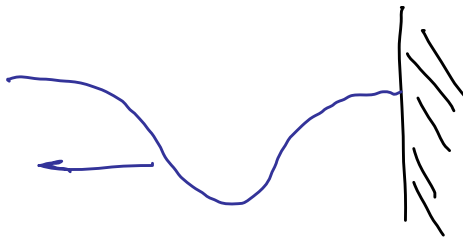
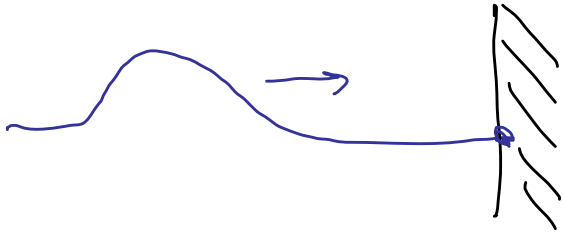
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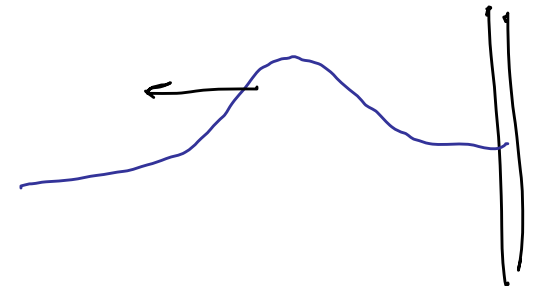
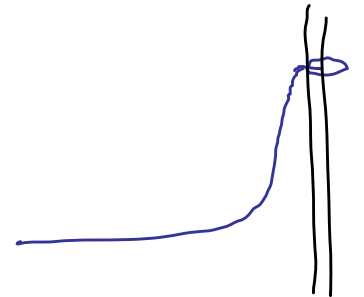
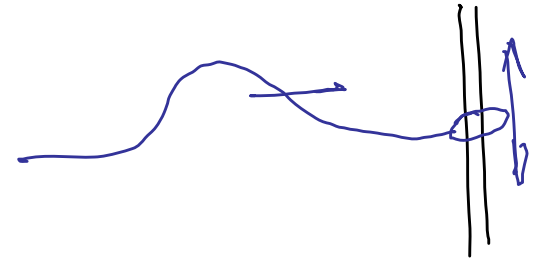
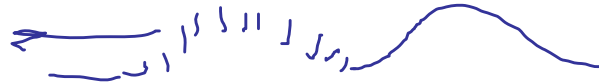
Get pulsed wave with
basic frequency
almost same as
either freq

Reflection

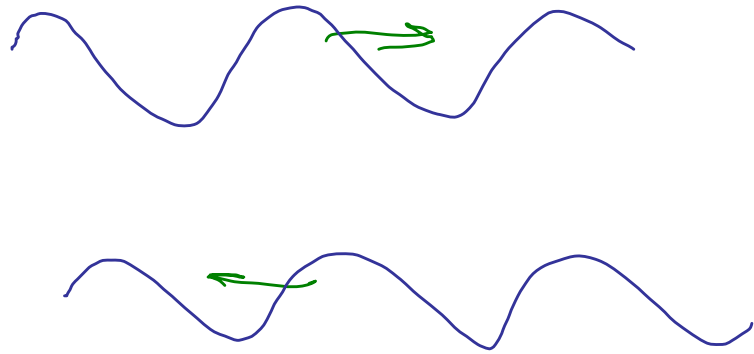
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Reflection.



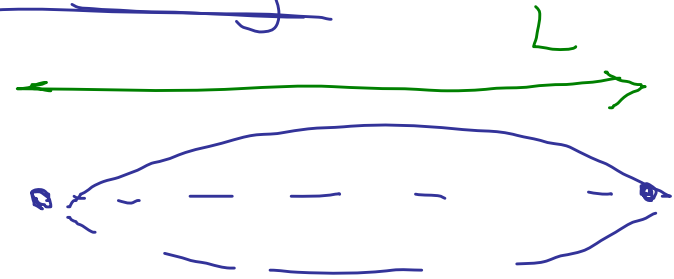
Standing waves



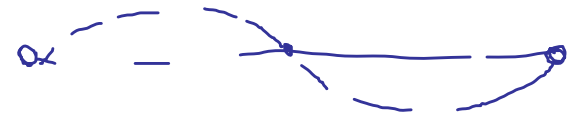
$$\lambda f = v$$

$$v = \sqrt{\frac{F}{\mu}}$$

String.

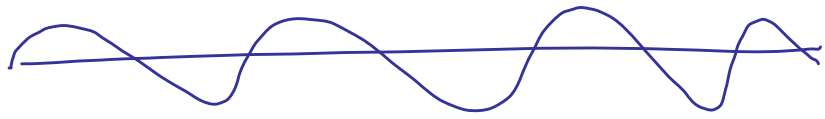


$$L = \lambda/2 \quad f = \frac{v}{\lambda} = \frac{v}{2L}$$



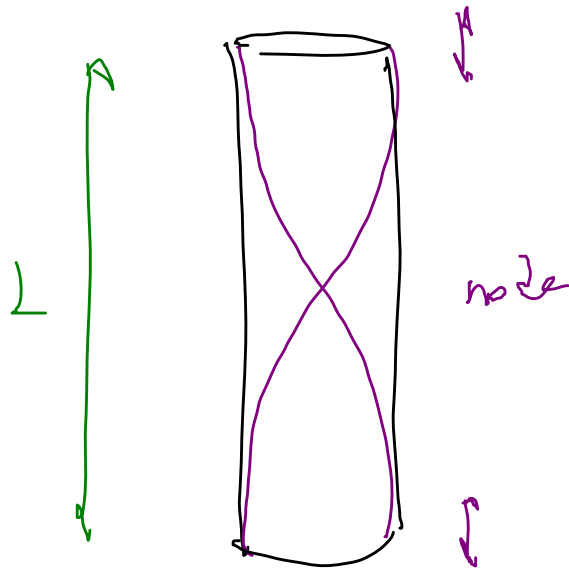
$$L = \lambda \quad f = \frac{v}{\lambda} = \frac{v}{L}$$

$$L = \frac{3}{2} \lambda \quad f = \frac{3v}{2L}$$



$$f_n = \frac{nv}{2L} = \frac{n}{2L} \sqrt{\frac{F}{\mu}}$$

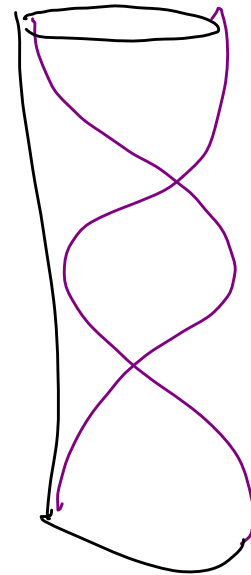
Standing waves in tube:



$$L = \lambda/2$$

$$\lambda f = v$$

$$f = \frac{v}{\lambda} = \frac{v}{2L}$$



$$L = \lambda$$

$$f = \frac{v}{\lambda}$$

$$f = \frac{v}{L}$$