

# Optics

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Journal Club

Oct. 18, 2022

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- Focus
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- Diffraction optical elements  
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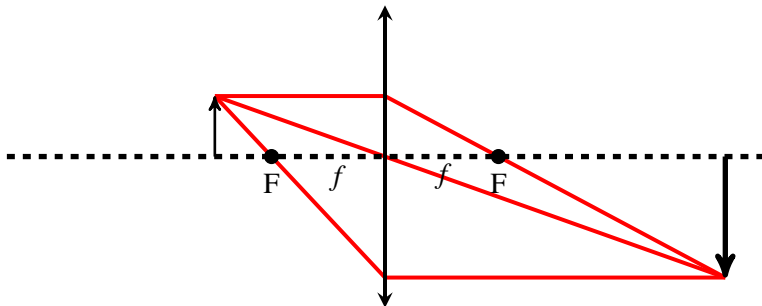
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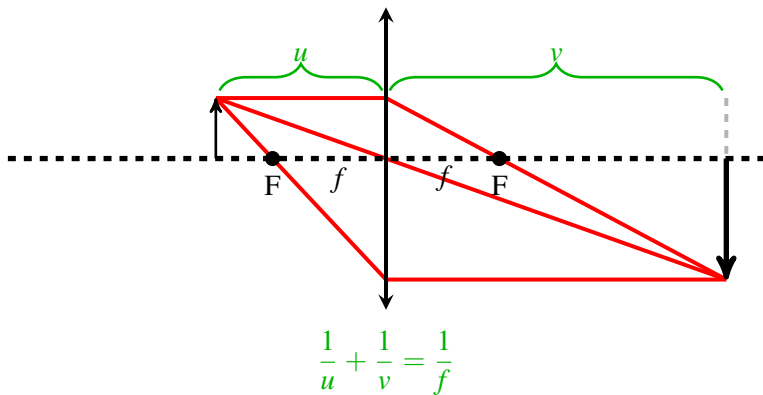
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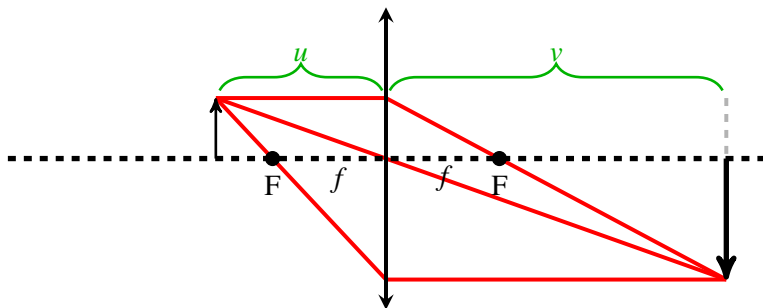
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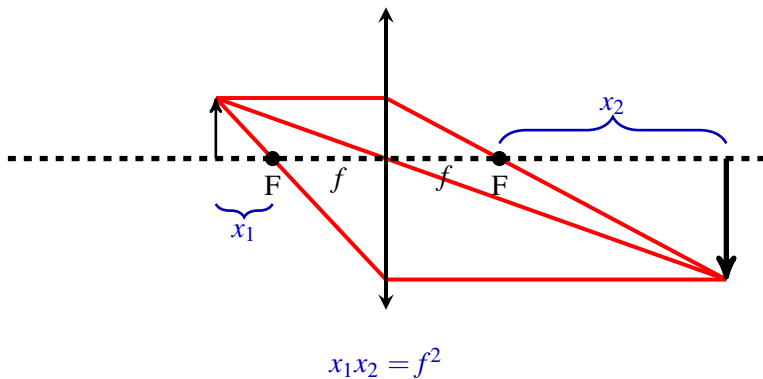


$$\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$$

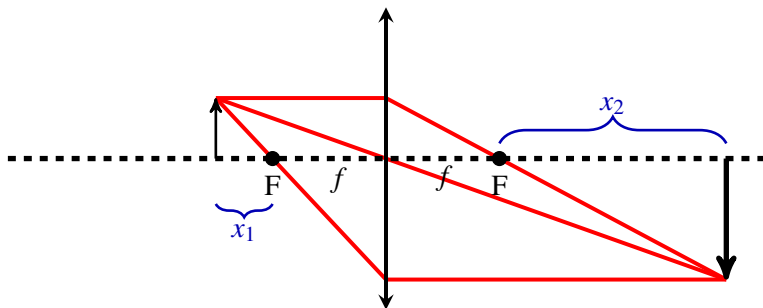
$$M = \frac{v}{u}$$



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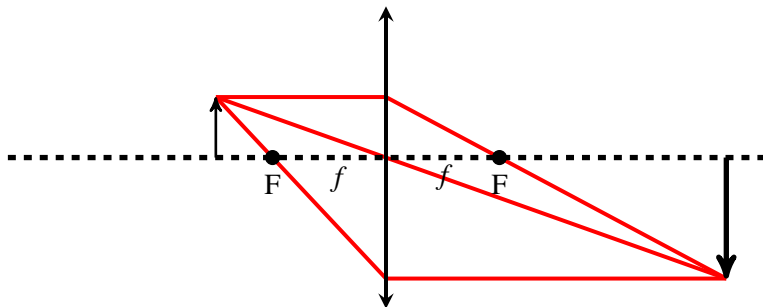
# Ideal Lens



$$x_1 x_2 = f^2$$

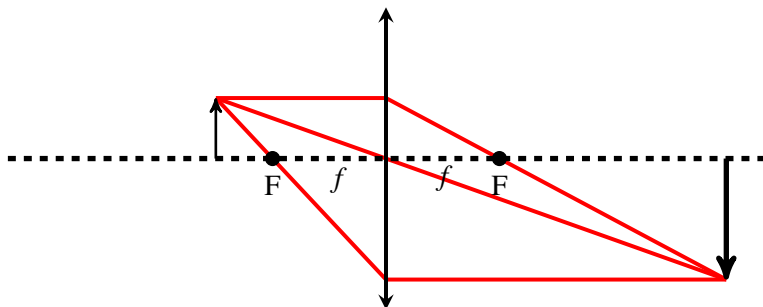
$$M = \frac{f}{x_1} = \frac{x_2}{f} = \sqrt{\frac{x_2}{x_1}}$$

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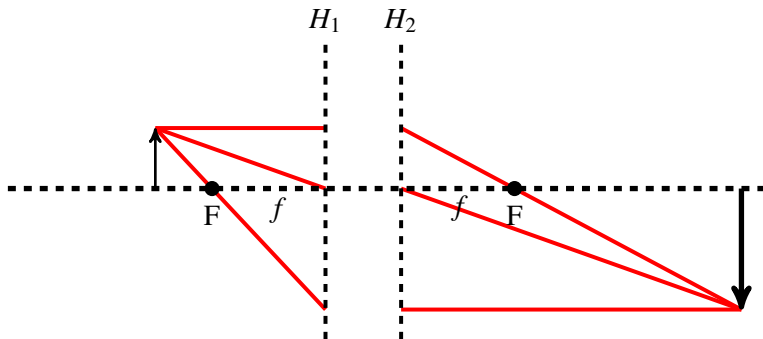
### Conjugate plane: Perfect image under ray optics

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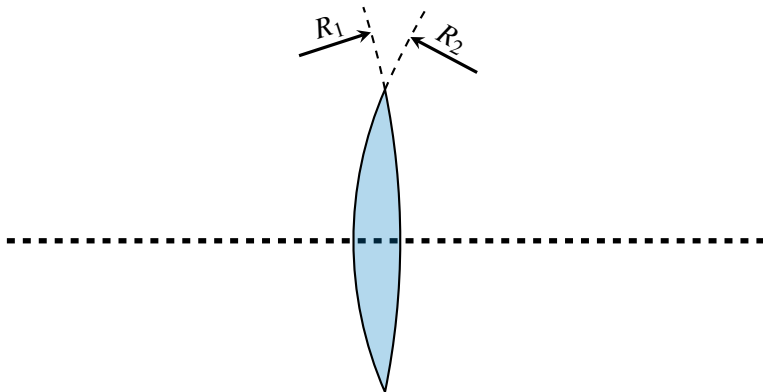


Conjugate plane: Perfect image under ray optics  
Principal planes: Conjugate plane where  $M = 1$

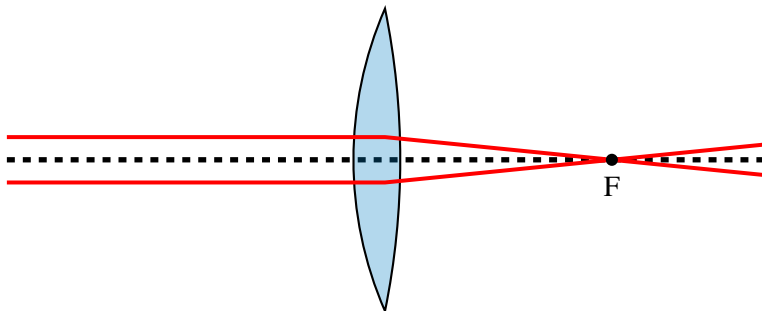
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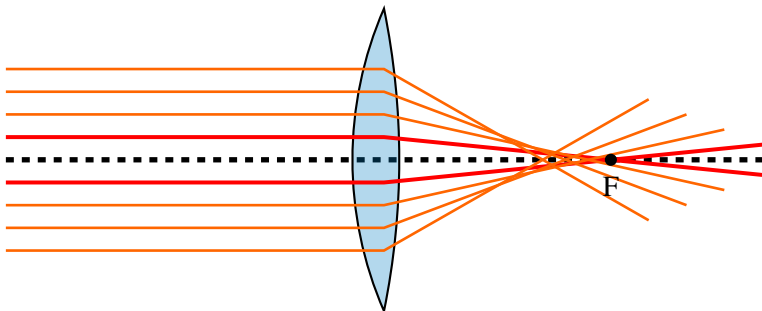
# Spherical lens



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