

image vs. object,  $f = 5$   
converging lens or mirror

$M = \text{magnification}$   
 $y = \text{distance to image}$

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{5}$$

image distance

$x = \text{distance to object}$

$F$

$2F$

magnification

$$M = -\frac{y}{x}$$

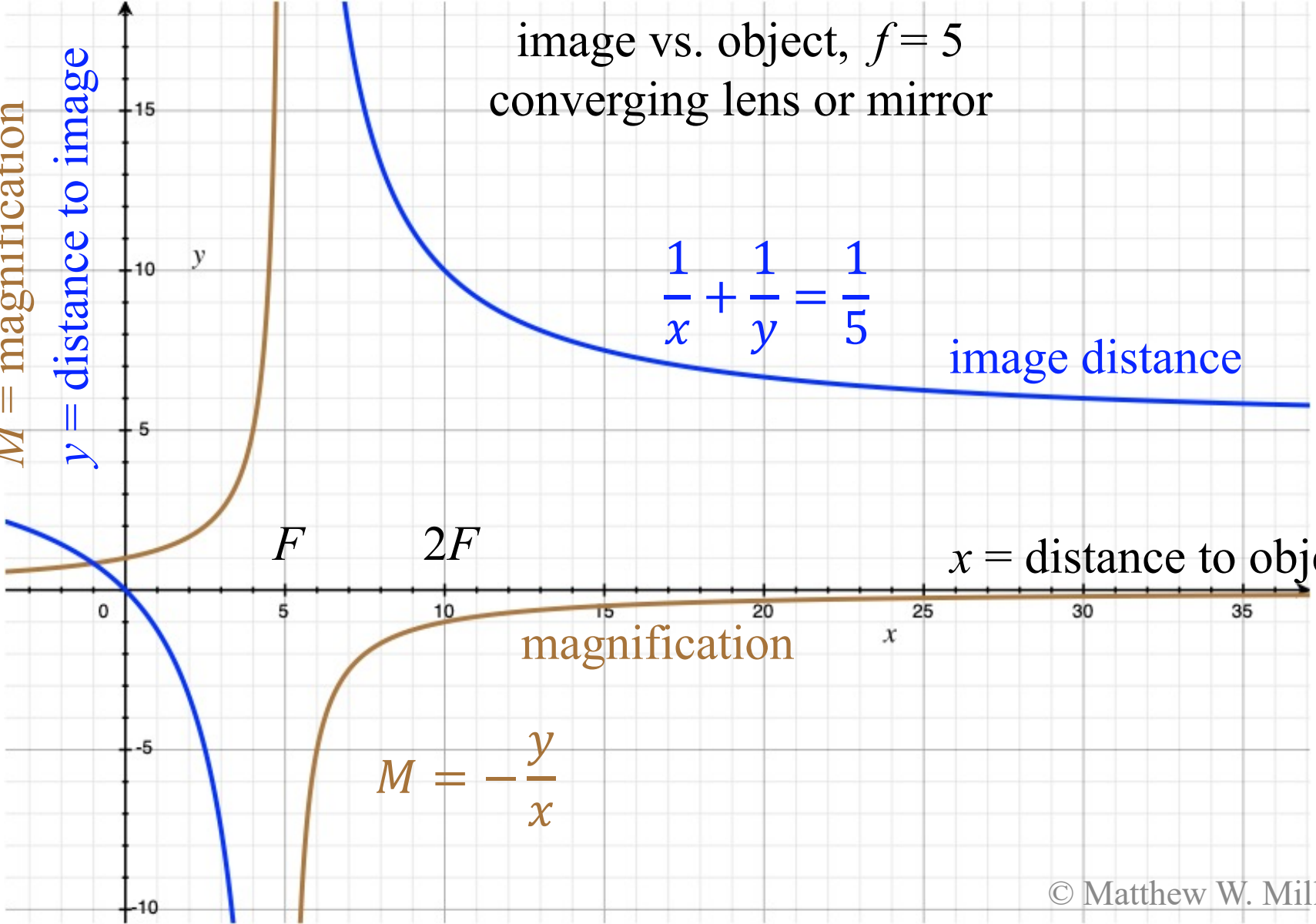


image vs. object,  $f = 5$   
converging lens or mirror

$M =$  magnification  
 $y =$  distance to image

$d_o = f$ : undefined  
no image exists!

image distance

$F$

$2F$

$x =$  distance to object

magnification

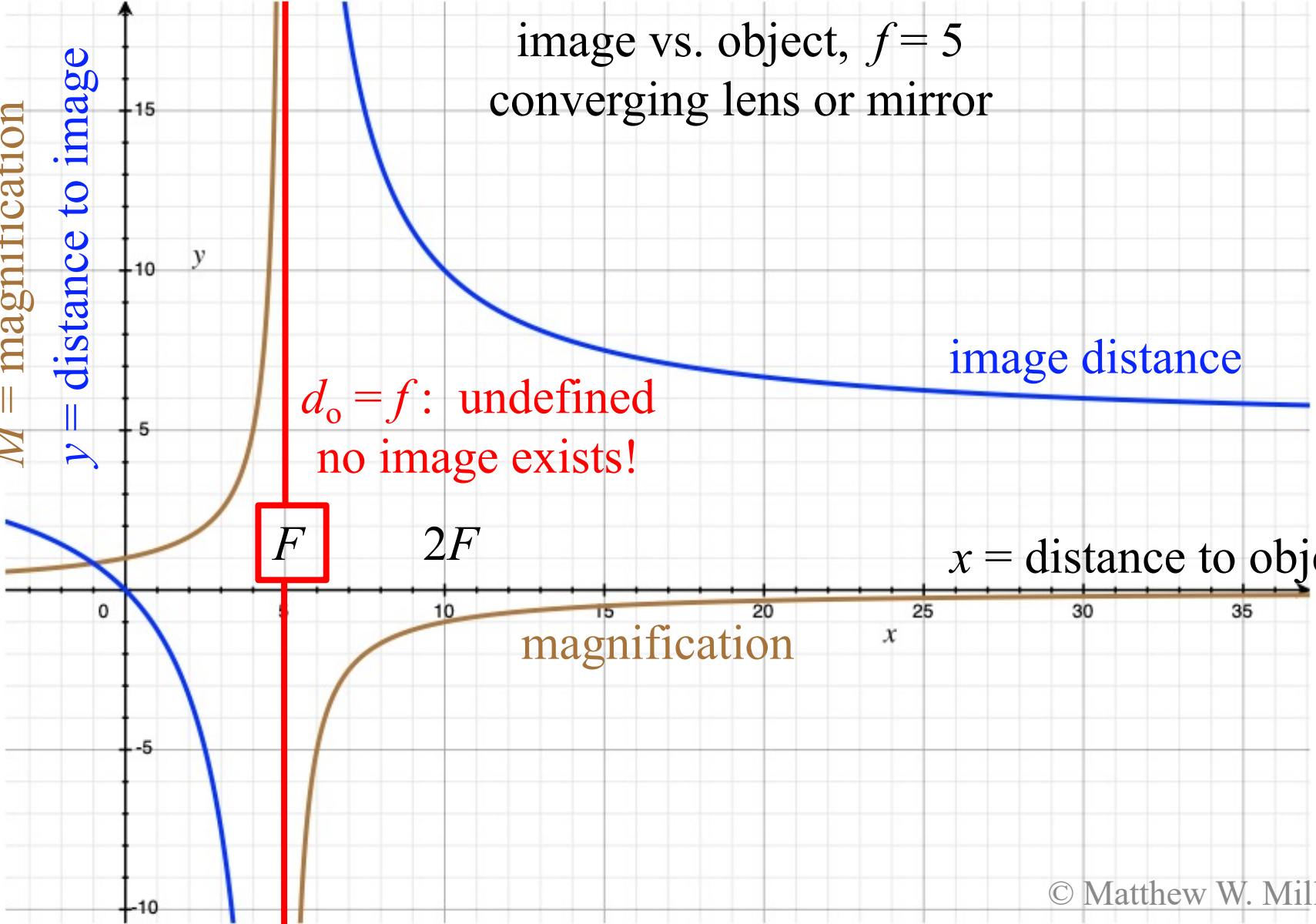


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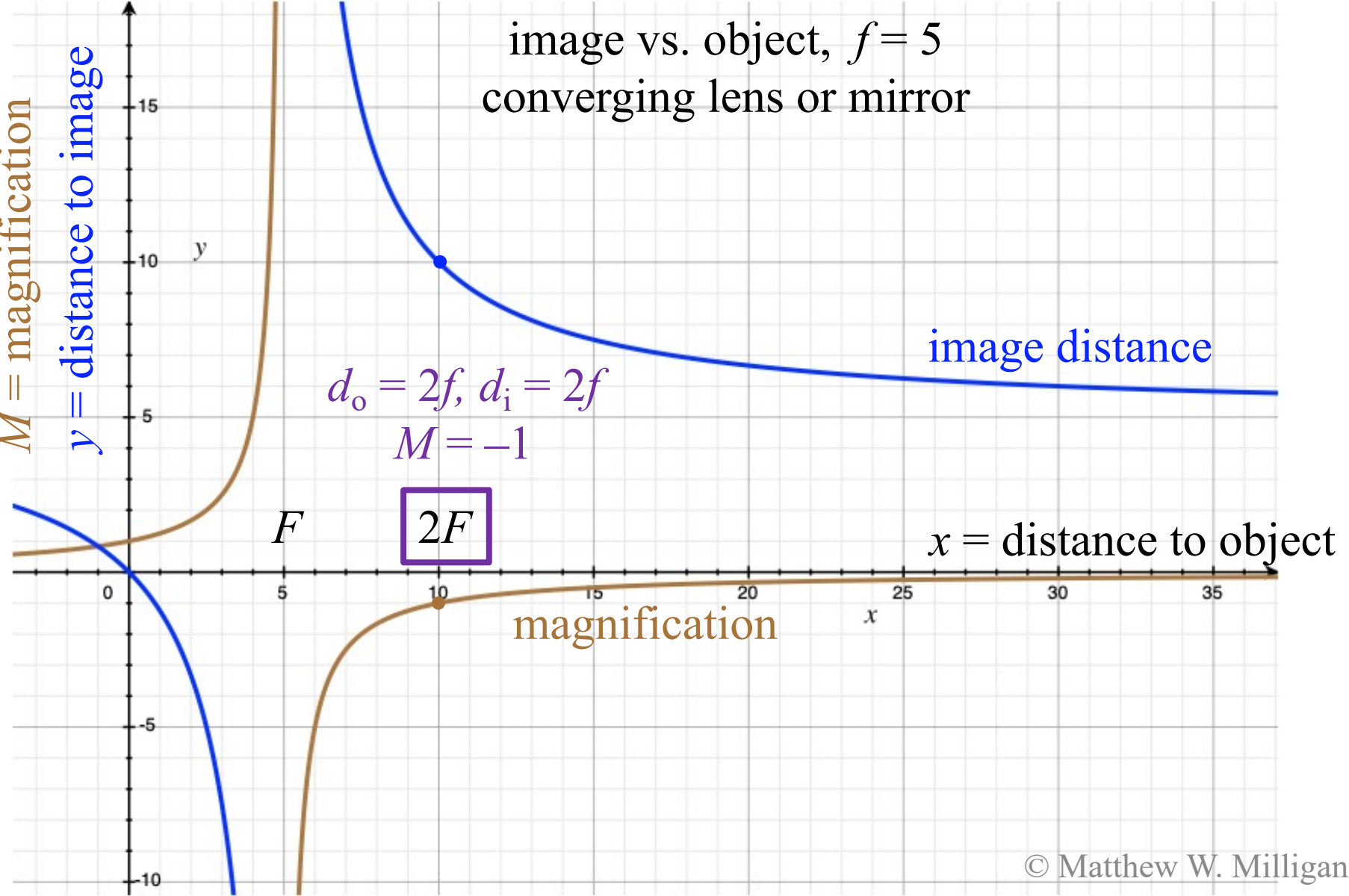


image vs. object,  $f = 5$   
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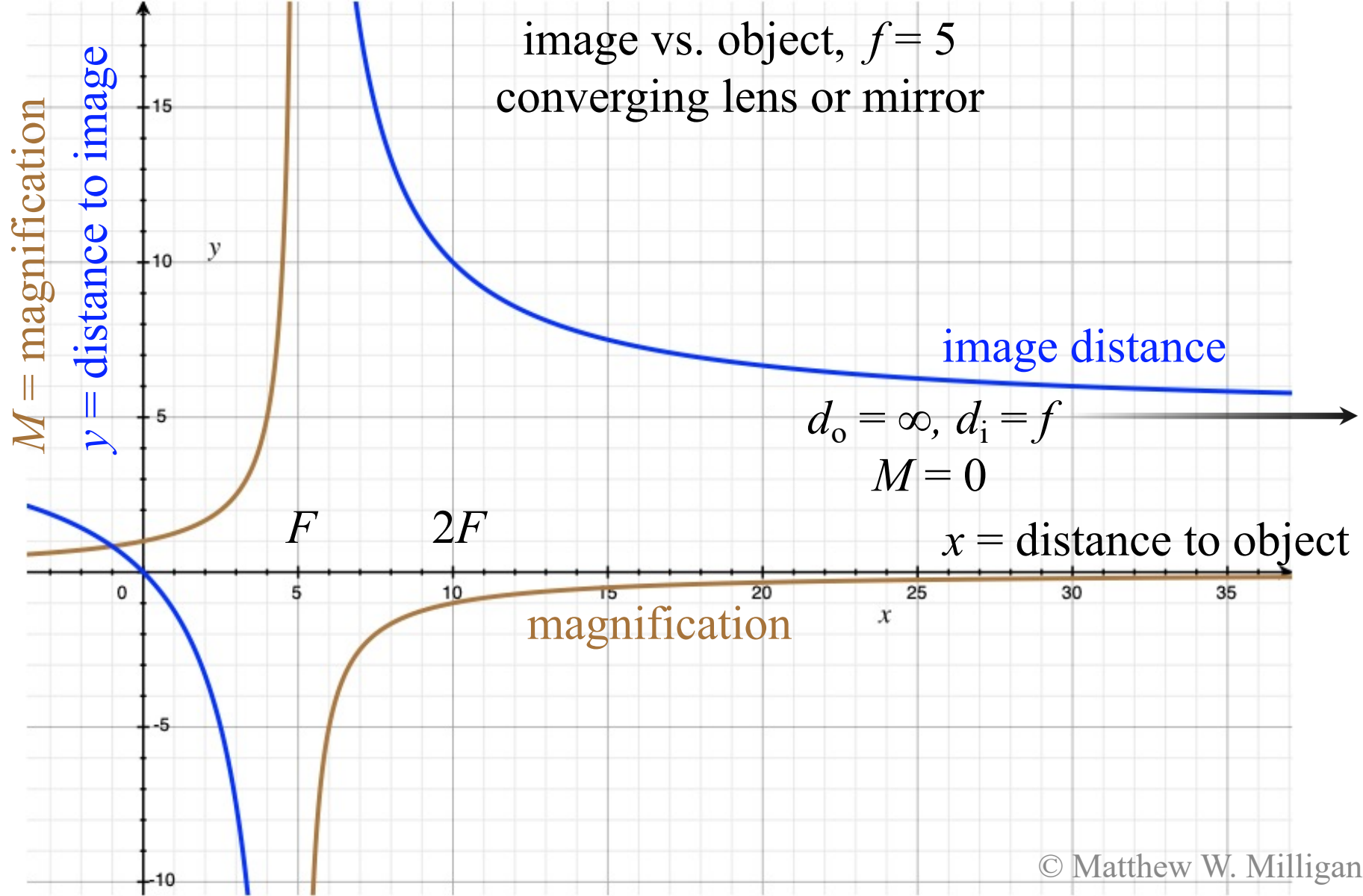


image vs. object,  $f = 5$   
converging lens or mirror

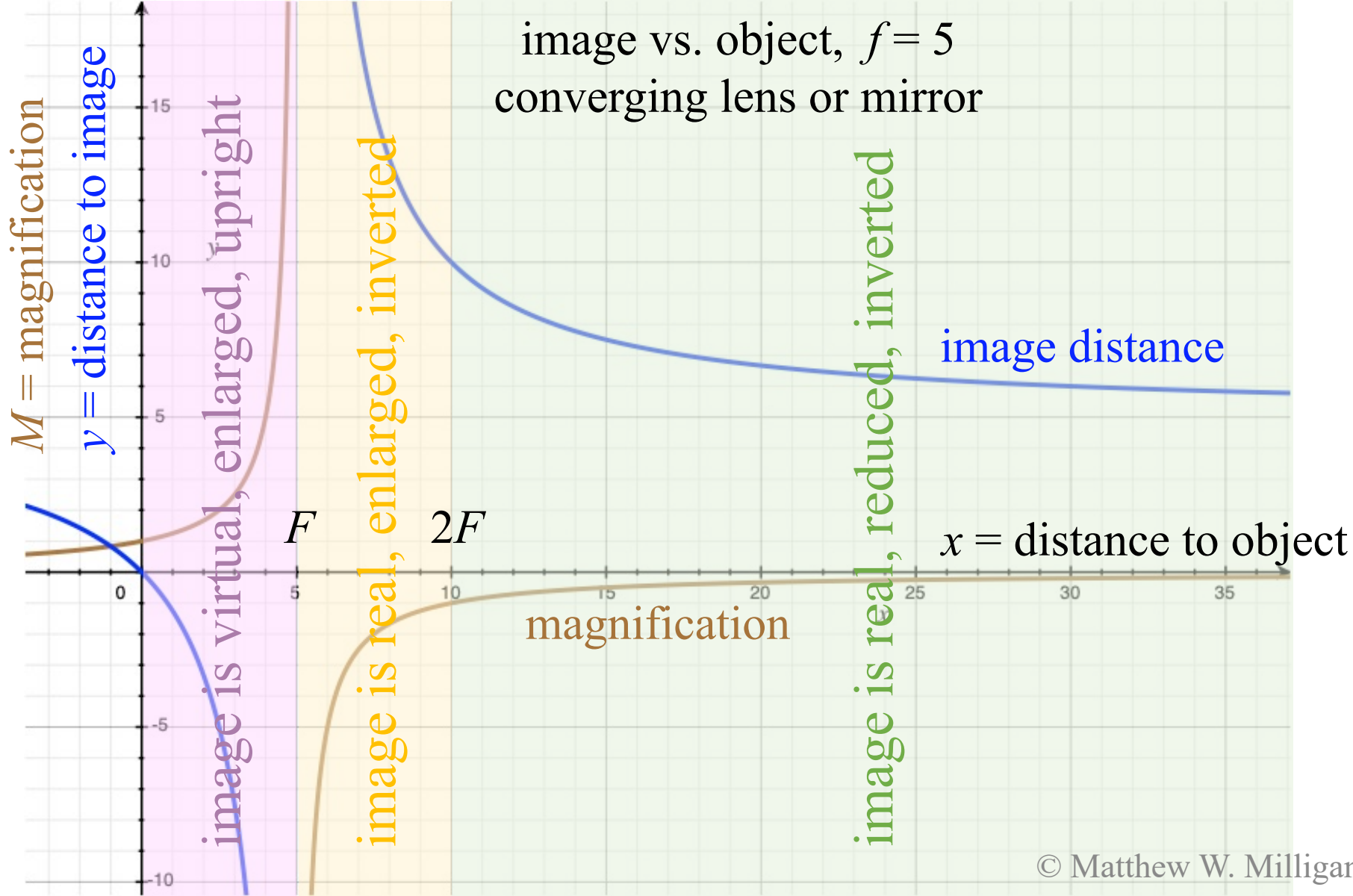


image vs. object,  $f = -5$   
diverging lens or mirror

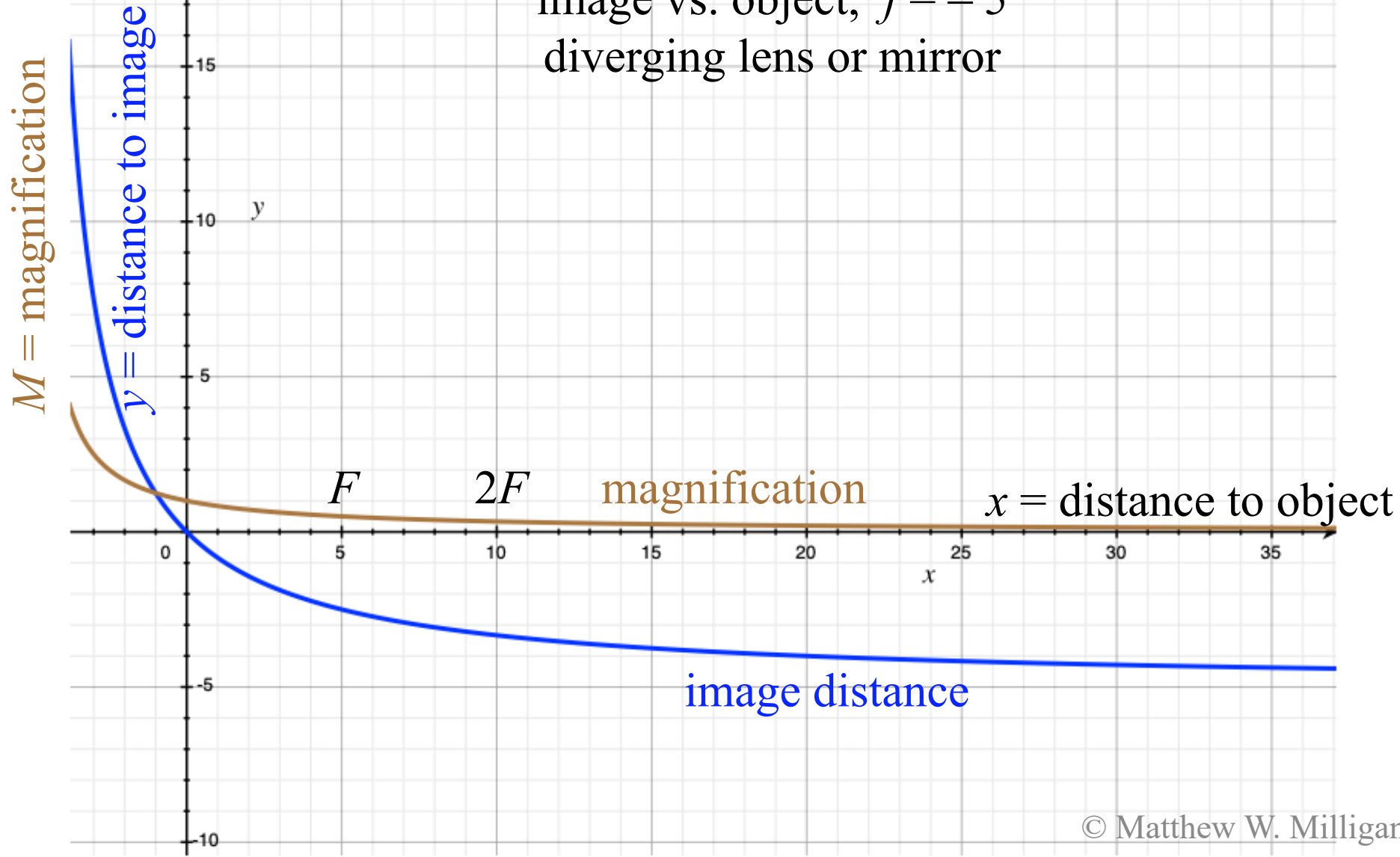


image vs. object,  $f = -5$   
diverging lens or mirror

$M =$  magnification

$y =$  distance to image

image is virtual, reduced, upright

magnification

$x =$  distance to object

image distance

