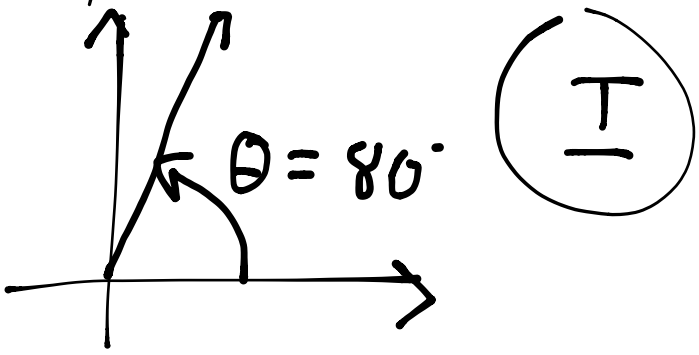
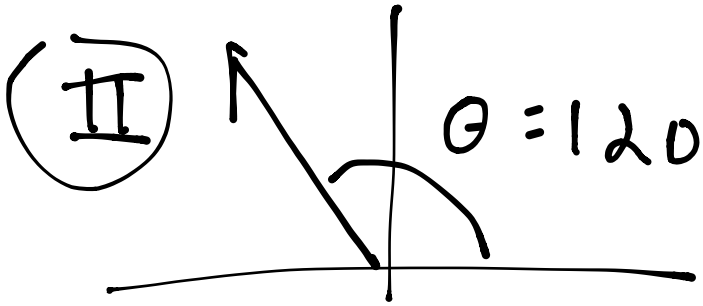
p. 57 Ex. 1

a) $0° < \theta < 90°$

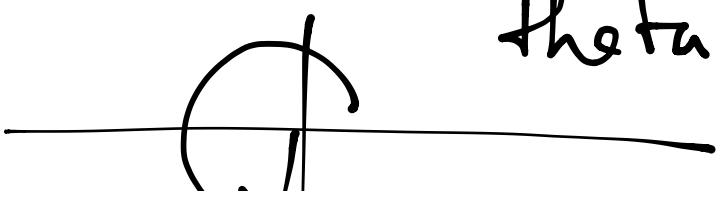



b) $90° < \theta < 180°$




c) $180° < \theta < 270°$

"theta"

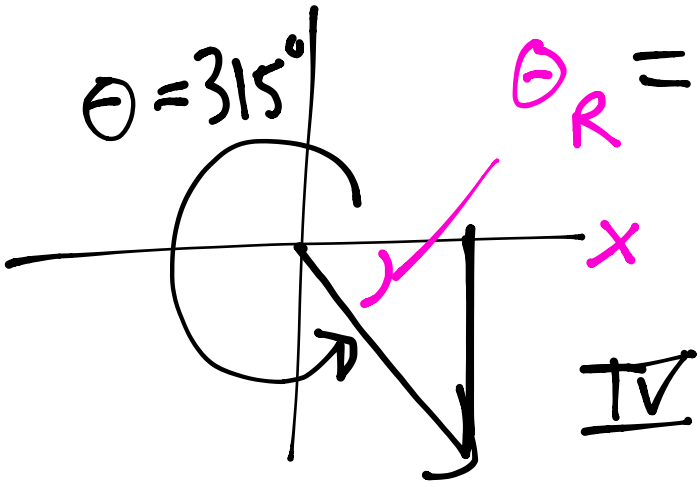


III

Ex. 2 p. 58

p. 60 #1

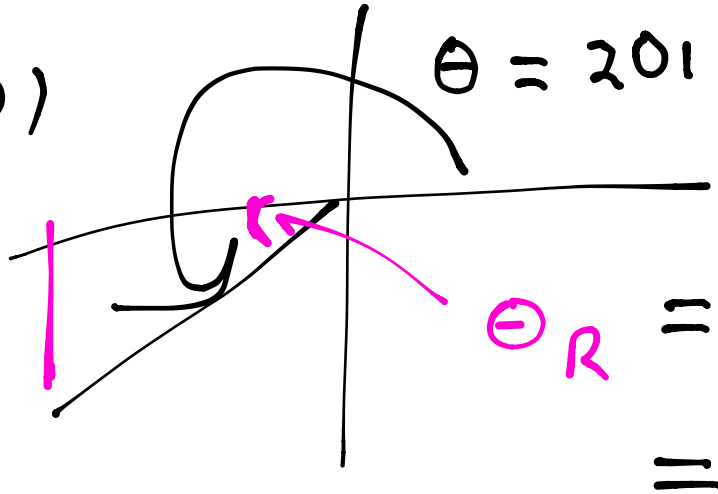
a) $\theta = 315°$




$\theta_R = 360 - 315°$

$= 45°$

b) $\theta = 201°$

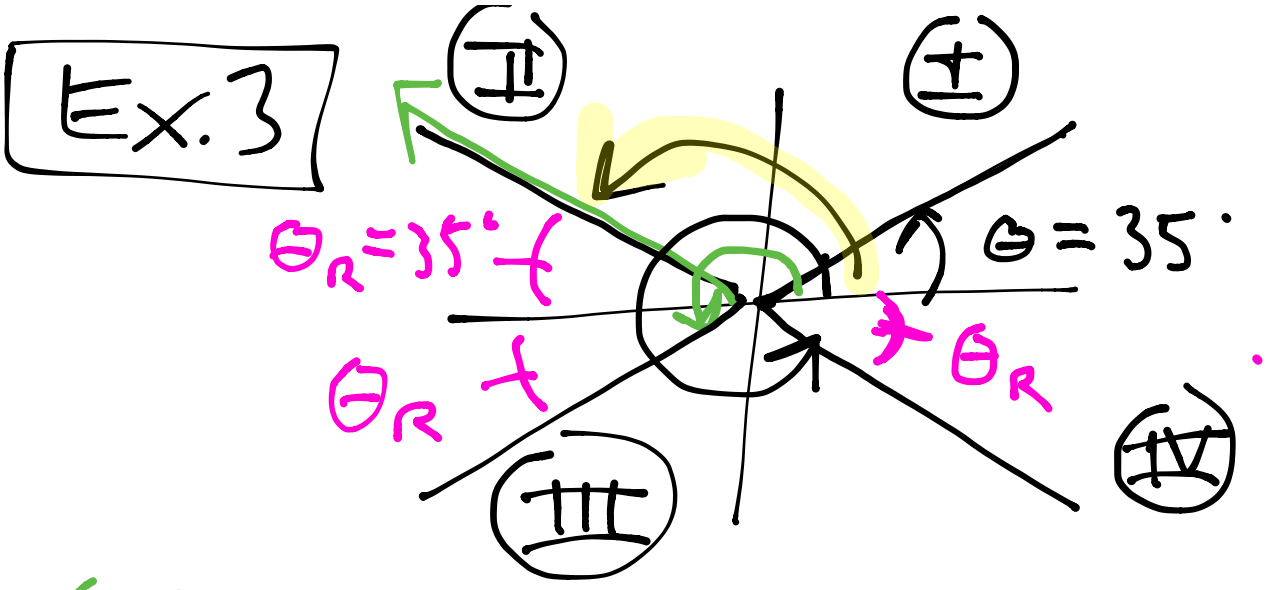


III

$\theta_R = 201° - 180°$

$= 21°$

## Ex. 3



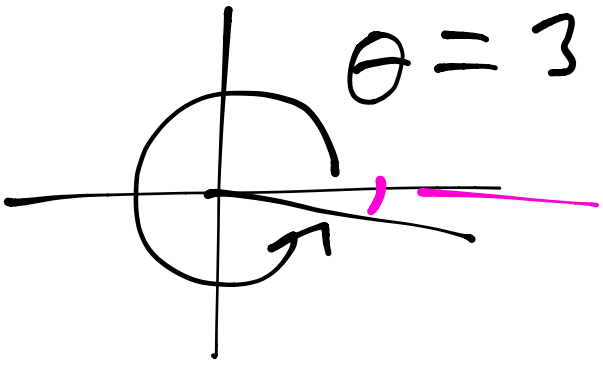

II $\theta = 180° - 35° = 145°$

III $\theta = 180° + 35 = 215°$

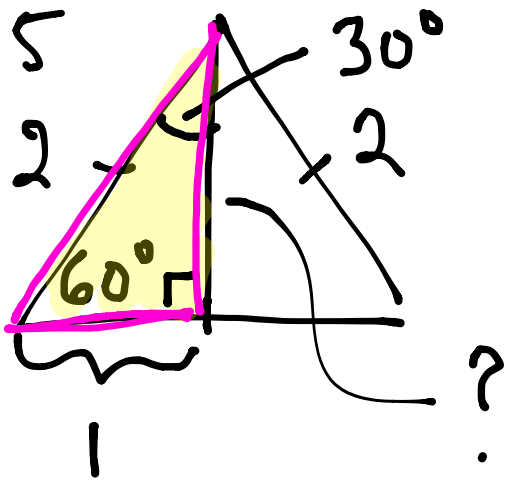
IV $\theta = 360° - 35° = 325°$

## p. 61 # 2-4

a)



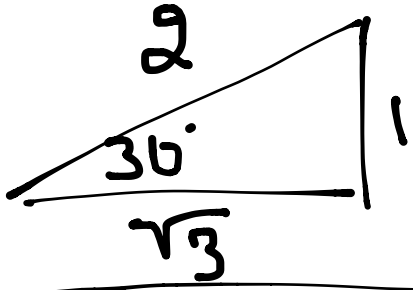
p. 64 #5

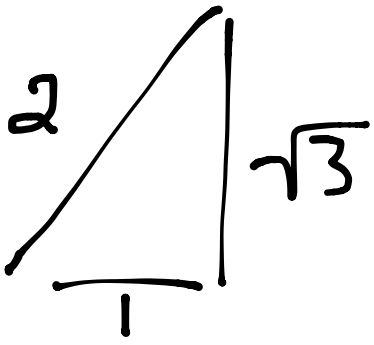



$x^2 = 4 - 1$

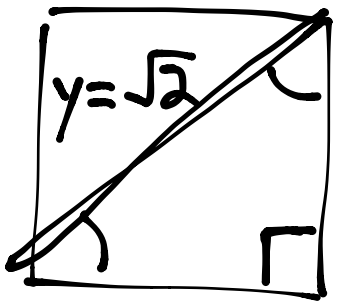
$x = \sqrt{3}$

$x^2 + 1^2 = 2^2$




| | $\theta = 30°$ | $\theta = 60°$ |
|---|---|---|
| $\sin\theta$ | $\sin 30° = \frac{1}{2}$ | $\sin 60° = \frac{\sqrt{3}}{2}$ |
| $\cos\theta$ | $\cos 30° = \frac{\sqrt{3}}{2}$ | $\cos 60° = 1/2$ |
| $\tan\theta$ | $\tan 30° = \frac{1}{\sqrt{3}}$ | $\tan 60° = \sqrt{3}$ |




$1^2 + 1^2 = y^2$

$y^2 = 2$

$y = \sqrt{2}$

$$\sin 45^\circ = \frac{1}{\sqrt{2}}$$

$$\cos 45^\circ = \frac{1}{\sqrt{2}}$$

$$\tan 45^\circ = 1$$

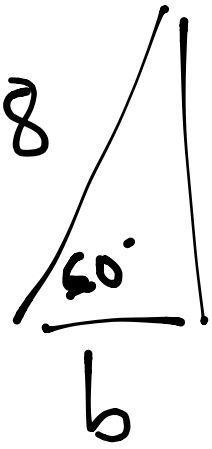
**6.** $\sin 60^\circ = \frac{x}{12}$

$$x = 12 \sin 60^\circ = 12\left(\frac{\sqrt{3}}{2}\right)$$

$$x = 6\sqrt{3}$$

- $\cos 60^\circ = \frac{y}{12}$
- $\tan 60^\circ = \frac{x}{y}$
- $x^2 + y^2 = 12^2$

p. 59 **Ex. 4**




$\cos 60^\circ = \frac{b}{8}$

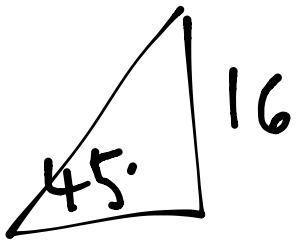
$\frac{8}{1}\left(\frac{1}{2}\right) = \left(\frac{b}{8}\right)\frac{8}{1}$

$b = 4$

$a - b = \boxed{4\sqrt{3} - 4}$

p. 65 #7

$h = 16$




$\tan 45° = \frac{16}{b_1}$