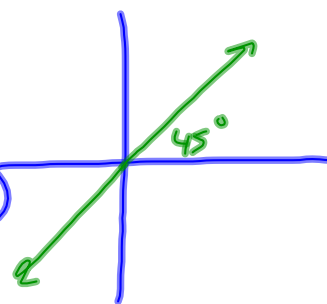


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$$y = x$$

$$\theta = 45^\circ$$



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

$$\tan \theta = 1$$

$$\theta = 45^\circ$$

$$r \sin \theta = r \cos \theta$$

$$\sin \theta = \cos \theta$$

$$\frac{\sin \theta}{\cos \theta} = 1$$

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(63)

$$\theta = \frac{4\pi}{3}$$

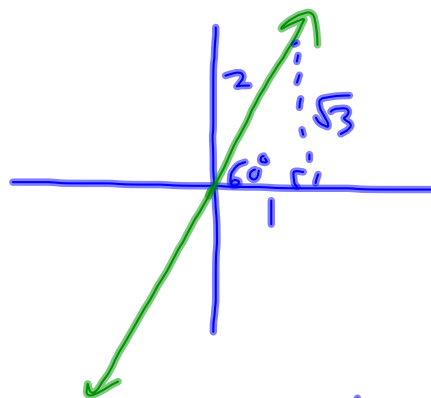
$$\theta = 240^\circ$$

$$\tan \theta = \tan 240^\circ$$

$$\tan \theta = \sqrt{3}$$

$$\frac{y}{x} = \sqrt{3}$$

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

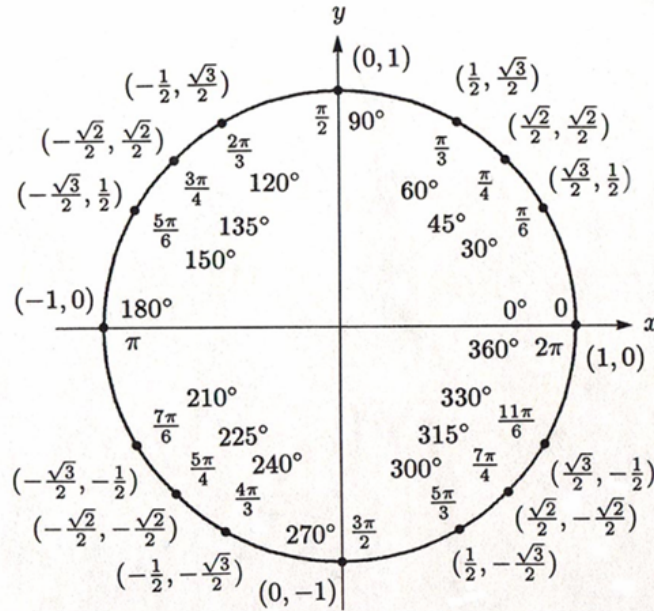


$$y = mx + b$$

$$y = \frac{\sqrt{3}}{1}x$$

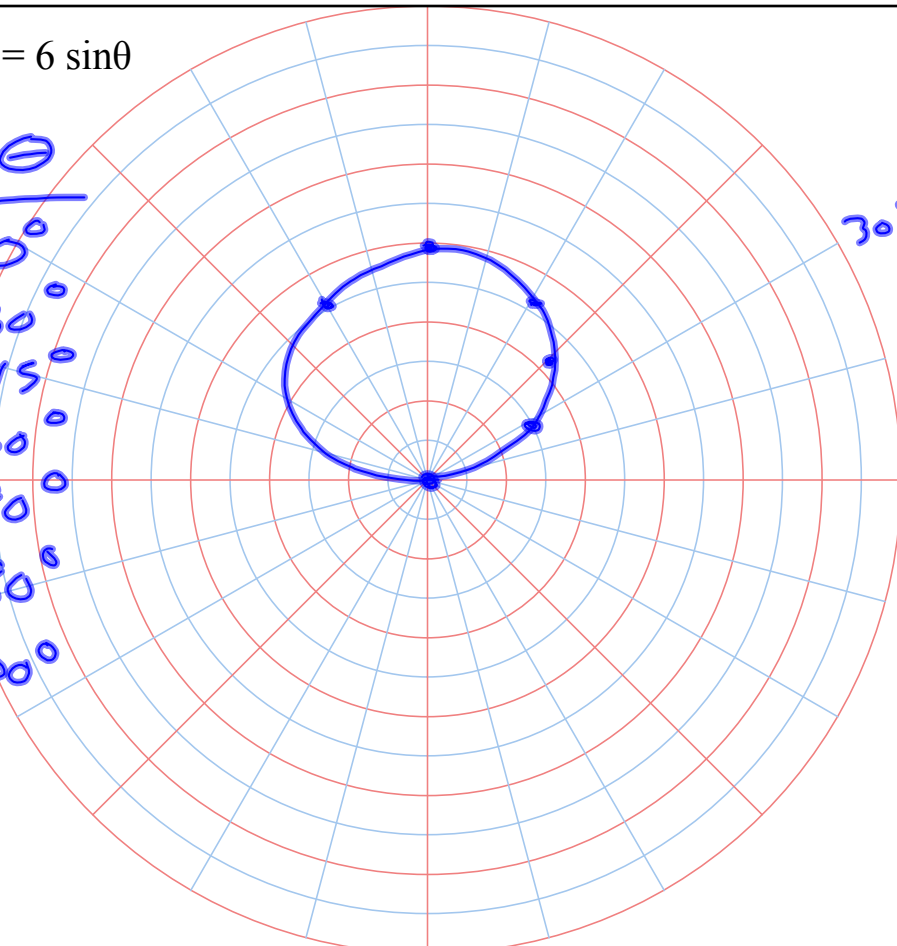
## 9-7 Graphing Polar Equations

You need your unit circle and polar graph paper!



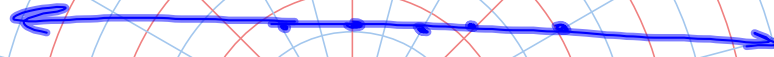
Graph:  $r = 6 \sin \theta$

| $r$ | $\theta$    |
|-----|-------------|
| 0   | $0^\circ$   |
| 3   | $30^\circ$  |
| 4.2 | $45^\circ$  |
| 5.2 | $60^\circ$  |
| 6   | $90^\circ$  |
| 0   | $180^\circ$ |
| 5.2 | $120^\circ$ |



Graph:  $r = \frac{3}{\sin \theta}$

| r    | $\theta$    |
|------|-------------|
| und. | $0^\circ$   |
| 6    | $30^\circ$  |
| 4.2  | $45^\circ$  |
| 3.5  | $60^\circ$  |
| 3    | $90^\circ$  |
| und. | $180^\circ$ |
| 3.5  | $120^\circ$ |



Graph:  $r = 5\cos(2\theta)$

