



**GOBIERNO DE
MÉXICO**

EDUCACIÓN
SECRETARÍA DE EDUCACIÓN PÚBLICA



**TECNOLÓGICO
NACIONAL DE MÉXICO**



TECNOLOGICO NACIONAL DE MEXICO

INSTITUTO TECNOLÓGICO DE CIUDAD MADERO

Carrera: Ingeniería en Sistemas Computacionales.

Materia: Graficación.

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Fotografía de frente



Grupo: 5505 A

Hora: 11:00 – 12:00

Semestre: Agosto - diciembre 2023.

02/10/23

$$\text{Sen}(A) = \frac{y}{r} = \frac{y}{1} = y$$

$$y = \text{Sen}(A)$$

$$\text{Cos}(A) = \frac{x}{r} = \frac{x}{1} = x$$

$$x = \text{Cos}(A)$$

$$0^\circ \quad \begin{aligned} \cos(0^\circ) &= 1 & (1, 0) \\ \sin(0^\circ) &= 0 \end{aligned}$$

$$30^\circ \quad \begin{aligned} \cos(30^\circ) &= \frac{\sqrt{3}}{2} & \left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right) \\ \sin(30^\circ) &= \frac{1}{2} \end{aligned}$$

$$45^\circ \quad \begin{aligned} \cos(45^\circ) &= \frac{\sqrt{2}}{2} & \left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right) \\ \sin(45^\circ) &= \frac{\sqrt{2}}{2} \end{aligned}$$

$$60^\circ \quad \begin{aligned} \cos(60^\circ) &= \frac{1}{2} & \left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right) \\ \sin(60^\circ) &= \frac{\sqrt{3}}{2} \end{aligned}$$

$$90^\circ \quad \begin{aligned} \cos(90^\circ) &= 0 & (0, 1) \\ \sin(90^\circ) &= +1 \end{aligned}$$

$$120^\circ \quad \begin{aligned} \cos(120^\circ) &= -\frac{1}{2} & \left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right) \\ \sin(120^\circ) &= \frac{\sqrt{3}}{2} \end{aligned}$$

$$135^\circ \quad \begin{aligned} \cos(135^\circ) &= -\frac{\sqrt{2}}{2} & \left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right) \\ \sin(135^\circ) &= \frac{\sqrt{2}}{2} \end{aligned}$$

$$150^\circ \quad \begin{aligned} \cos(150^\circ) &= -\frac{\sqrt{3}}{2} & \left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right) \\ \sin(150^\circ) &= \frac{1}{2} \end{aligned}$$

$$180^\circ \quad \begin{aligned} \cos(180^\circ) &= -1 & (-1, 0) \\ \sin(180^\circ) &= 0 \end{aligned}$$

$$210^\circ \quad \begin{aligned} \cos(210^\circ) &= -\frac{\sqrt{3}}{2} & \left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right) \\ \sin(210^\circ) &= -\frac{1}{2} \end{aligned}$$

$$225^\circ \quad \begin{aligned} \cos(225^\circ) &= -\frac{\sqrt{2}}{2} & \left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right) \\ \sin(225^\circ) &= -\frac{\sqrt{2}}{2} \end{aligned}$$

$$240^\circ \quad \begin{aligned} \cos(240^\circ) &= -\frac{1}{2} & \left(-\frac{1}{2}, -\frac{\sqrt{3}}{2}\right) \\ \sin(240^\circ) &= -\frac{\sqrt{3}}{2} \end{aligned}$$

$$270^\circ \quad \begin{aligned} \cos(270^\circ) &= 0 & (0, -1) \\ \sin(270^\circ) &= -1 \end{aligned}$$

$$300^\circ \quad \begin{aligned} \cos(300^\circ) &= \frac{1}{2} & \left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right) \\ \sin(300^\circ) &= -\frac{\sqrt{3}}{2} \end{aligned}$$

$$315^\circ \quad \begin{aligned} \cos(315^\circ) &= \frac{\sqrt{2}}{2} & \left(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right) \\ \sin(315^\circ) &= -\frac{\sqrt{2}}{2} \end{aligned}$$

$$330^\circ \quad \begin{aligned} \cos(330^\circ) &= \frac{\sqrt{3}}{2} & \left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right) \\ \sin(330^\circ) &= -\frac{1}{2} \end{aligned}$$

$$360^\circ \quad \begin{aligned} \cos(360^\circ) &= 1 & (1, 0) \\ \sin(360^\circ) &= 0 \end{aligned}$$

Scribe

Angulo	Coseno	Senó
0° 0	1	0
30° $\pi/6$	$\sqrt{3}/2$	$1/2$
45° $\pi/4$	$\sqrt{2}/2$	$\sqrt{2}/2$
60° $\pi/3$	$1/2$	$\sqrt{3}/2$
90° $\pi/2$	0	1
120° $2\pi/3$	$-1/2$	$\sqrt{3}/2$
135° $3\pi/4$	$-\sqrt{2}/2$	$\sqrt{2}/2$
150° $5\pi/6$	$-\sqrt{3}/2$	$1/2$
180° π	-1	0
210° $7\pi/6$	$-\sqrt{3}/2$	$-1/2$
225° $5\pi/4$	$-\sqrt{2}/2$	$-\sqrt{2}/2$
240° $4\pi/3$	$-1/2$	$-\sqrt{3}/2$
270° $3\pi/2$	0	-1
300° $5\pi/3$	$1/2$	$-\sqrt{3}/2$
315° $7\pi/4$	$\sqrt{2}/2$	$-\sqrt{2}/2$
330° $11\pi/6$	$\sqrt{3}/2$	$-1/2$
360° 2π	1	0

