

TRIGONOMETRY: PHASE SHIFT REFERENCE

$$y = A \sin(B(x - C)) + D$$

Standard Form for Periodic Functions

VARIABLE	TERM	GRAPH TRANSFORMATION
$ A $	Amplitude	Vertical stretch/compression (Height)
$2\pi/B$	Period	Horizontal length of one full cycle
C	Phase Shift	Horizontal translation (Left/Right)
D	Vertical Shift	Equilibrium position (Up/Down)

Direction of Phase Shift (C)

If $(x - C)$: Shift **Right** by C units.

If $(x + C)$: Shift **Left** by C units.

Calculation Notes

If the equation is $\sin(Bx - C)$, the phase shift is C / B .

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