

Sketching Sinusoidal Functions Worksheet

Fill in the chart below. Sketch the graphs (Show two cycles).

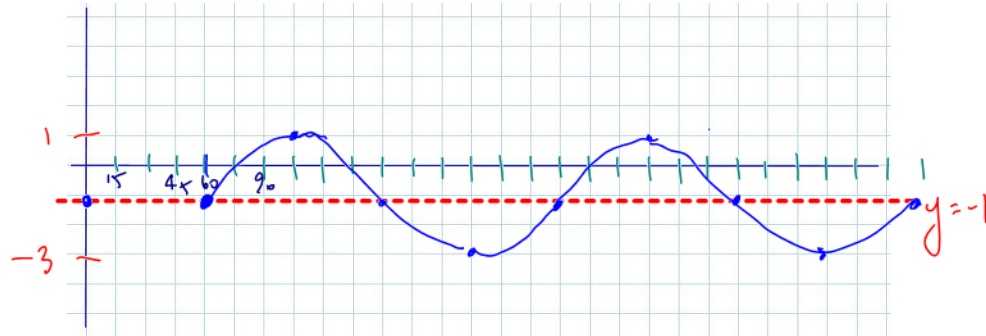
$$f(\theta) = a \sin(k(\theta - d)) + c$$

Function	Proper Form	Amplitude	Period	Phase Shift	Eqn of Central Axis	Domain (for 2 cycles)	Range
$f(x) = 2 \sin(2x - 120^\circ) - 1$	$2 \sin(2(x - \frac{60^\circ}{2})) - 1$ $k=2$	2	$\frac{360^\circ}{2} = 180^\circ$	60° right	$y = -1$	$0 \leq x \leq 360^\circ$	$-3 \leq f(x) \leq 1$
$g(\theta) = \frac{1}{2} \cos(3\theta + 90^\circ) + 2$							
$y = 4 \sin(6x + 180^\circ) - 2$							
$f(x) = -2 \sin\left(\frac{3}{4}x + 45^\circ\right) + 3$							
$h(\theta) = \frac{3}{4} \cos(2\theta + 120^\circ) + 1$							
$f(x) = -3 \sin\left(\frac{1}{2}x + 45^\circ\right)$							
$h(\theta) = 2 \sin(2\theta - 90^\circ) + 3$							

$$P = 180^\circ \Rightarrow \Delta Q = \frac{180}{4} = 45^\circ \quad \text{gcf}\{45, 60\} = 15$$

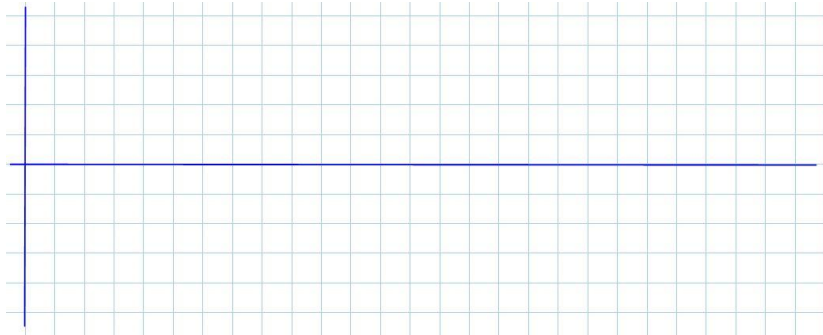
$$P.S. = 60^\circ$$

1. $f(x) = 2\sin(2(x-60)) - 1$

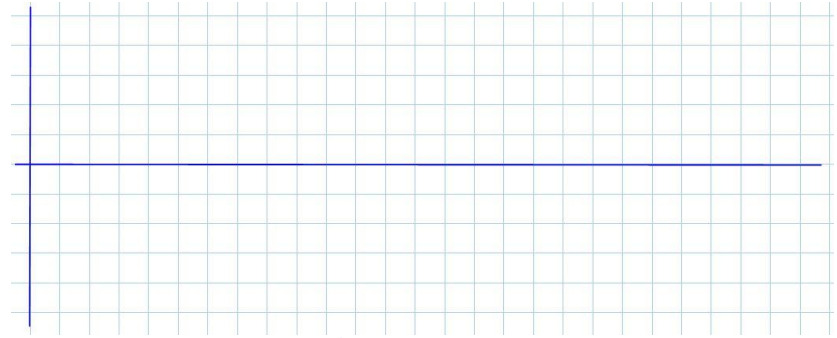


$$\Delta Q = 45^\circ = 3 \text{ cycles}$$

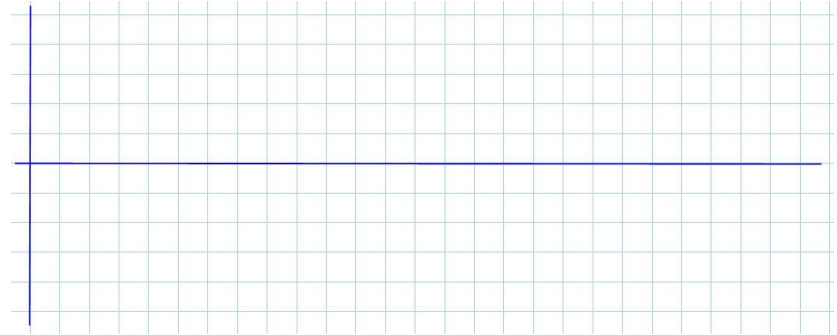
3.



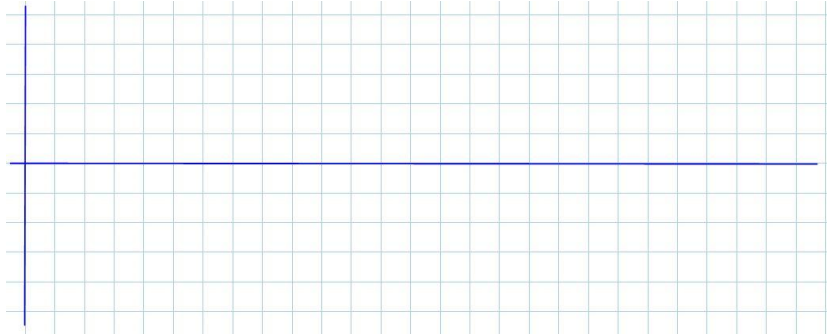
2.



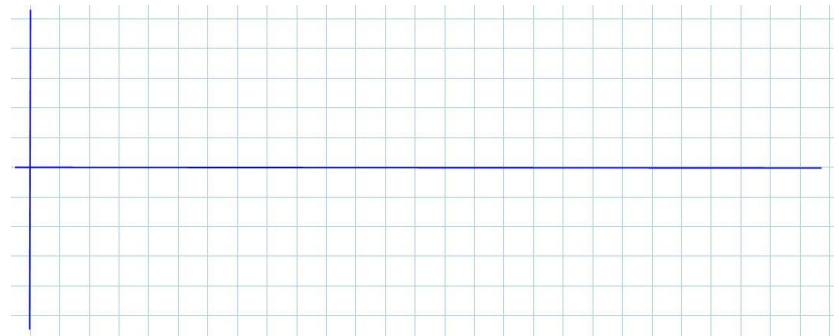
4.



5.



6.



7.

