

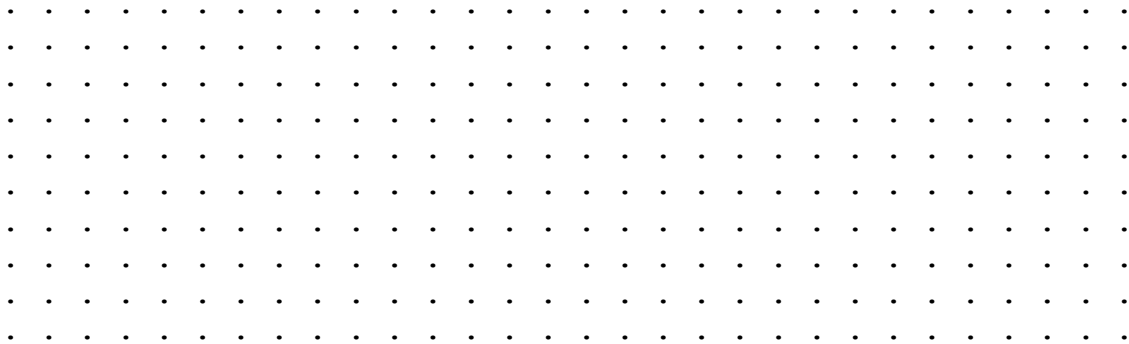
Fill in the all the information. For Domain and x-intercepts, assume if the function runs for 2 cycles, starting at x=0.

$P = \frac{360}{k}$

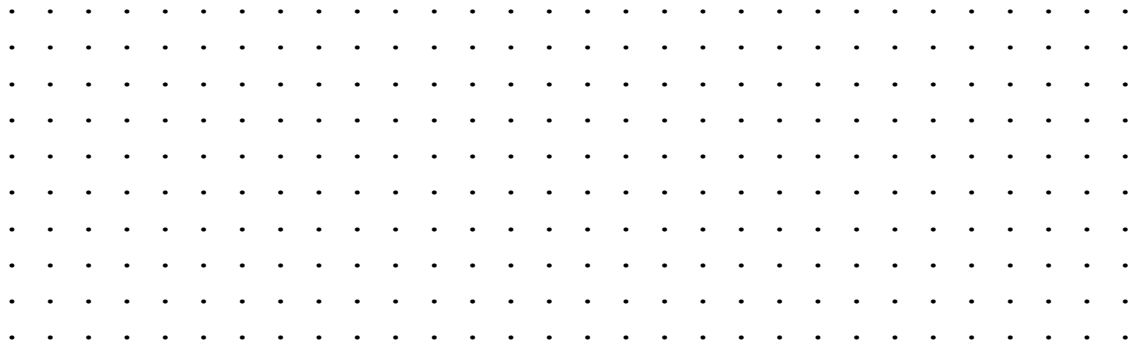
using graphcalc

Function	Proper Form	Vert. Stretch	Horiz. Stretch	Vert. Shift	Horiz. Shift	Eqn of Axis	Amplitude	Period	Peak	Trough	Domain	Range	y-ints	x-ints
$y = 2 \sin(2x - 120) - \frac{1}{2}$	$y = 2 \sin(2(x - 60)) - \frac{1}{2}$	2	$\frac{1}{2}$	$\frac{1}{2} \downarrow$	$\overrightarrow{60^\circ}$	$y = -\frac{1}{2}$	2	180°	1.5	-2.5	$0^\circ \leq x \leq 360^\circ$	$-2.5 \leq y \leq 1.5$	-2.23	$67.2^\circ, 142.8^\circ$ $247.2^\circ, 322.8^\circ$
$y = \frac{1}{2} \cos(3x - 90) - 1$	$y = \frac{1}{2} \cos(3(x - 30)) - 1$	$\frac{1}{2}$	$\frac{1}{3}$	$1 \downarrow$	$\overrightarrow{30^\circ}$	$y = -1$	$\frac{1}{2}$	120°	-0.5	-1.5	$0^\circ \leq x \leq 240^\circ$	$-1.5 \leq y \leq -0.5$	-1	none
$y = 4 \sin(6x + 180) - 3$	$y = 4 \sin(6(x + 30)) - 3$	4	$\frac{1}{6}$	$3 \downarrow$	$\overleftarrow{30^\circ}$	$y = -3$	4	60°	1	-7	$0^\circ \leq x \leq 120^\circ$	$-7 \leq y \leq 1$	-3	$38.1^\circ, 51.9^\circ$ $98.1^\circ, 111.9^\circ$
$y = -2 \sin(\frac{3}{4}x + 45) + 3$	$y = -2 \sin(\frac{3}{4}(x + 60)) + 3$	2	$\frac{4}{3}$	$3 \uparrow$	$\overleftarrow{60^\circ}$	$y = 3$	2	480°	5	1	$0^\circ \leq x \leq 960^\circ$	$1 \leq y \leq 5$	1.58	none
$y = \frac{3}{4} \cos(2x - 60) + 5$	$y = \frac{3}{4} \cos(2(x - 30)) + 5$	$\frac{3}{4}$	$\frac{1}{2}$	$5 \uparrow$	$\overrightarrow{30^\circ}$	$y = 5$	$\frac{3}{4}$	180°	$\frac{23}{4}$	$\frac{17}{4}$	$0^\circ \leq x \leq 360^\circ$	$\frac{17}{4} \leq y \leq \frac{23}{4}$	5.375	none
$y = -2 \sin(\frac{1}{2}x + 45)$	$y = -2 \sin(\frac{1}{2}(x + 90))$	2	2	0	$\overleftarrow{90^\circ}$	$y = 0$	2	720°	2	-2	$0^\circ \leq x \leq 1440^\circ$	$-2 \leq y \leq 2$	-1.41	$270^\circ, 630^\circ$ $990^\circ, 1350^\circ$
$y = -\cos(4x - 180) + 4$	$y = -\cos(4(x - 45)) + 4$	1	$\frac{1}{4}$	$4 \uparrow$	$\overrightarrow{45^\circ}$	$y = 4$	1	90°	5	3	$0^\circ \leq x \leq 180^\circ$	$3 \leq y \leq 5$	5	none
$y = -\frac{1}{2} \sin(2x + 30) + 3$	$y = -\frac{1}{2} \sin(2(x + 15)) + 3$	$\frac{1}{2}$	$\frac{1}{2}$	$3 \uparrow$	$\overleftarrow{15^\circ}$	$y = 3$	$\frac{1}{2}$	180°	$\frac{7}{2}$	$\frac{5}{2}$	$0^\circ \leq x \leq 360^\circ$	$\frac{5}{2} \leq y \leq \frac{7}{2}$	2.75	none
$y = 2 \sin(3x - 90) + \frac{1}{2}$	$y = 2 \sin(3(x - 30)) + \frac{1}{2}$	2	$\frac{1}{3}$	$\frac{1}{2} \uparrow$	$\overrightarrow{30^\circ}$	$y = \frac{1}{2}$	2	120°	$\frac{5}{2}$	$-\frac{3}{2}$	$0^\circ \leq x \leq 240^\circ$	$-\frac{3}{2} \leq y \leq \frac{5}{2}$	$-\frac{3}{2}$	$25.2^\circ, 94.8^\circ$ $145.2^\circ, 214.8^\circ$
$y = \frac{2}{3} \cos(\frac{1}{2}x - 60) - \frac{3}{4}$	$y = \frac{2}{3} \cos(\frac{1}{2}(x - 120)) - \frac{3}{4}$	$\frac{2}{3}$	2	$\frac{3}{4} \downarrow$	$\overrightarrow{120^\circ}$	$y = -\frac{3}{4}$	$\frac{2}{3}$	720°	$-\frac{1}{12}$	$-\frac{17}{12}$	$0^\circ \leq x \leq 1440^\circ$	$-\frac{17}{12} \leq y \leq -\frac{1}{12}$	-0.417	none
$y = \frac{1}{2} \cos(4x + 90)$	$y = \frac{1}{2} \cos(4(x + 22.5))$	$\frac{1}{2}$	$\frac{1}{4}$	0	$\overleftarrow{22.5^\circ}$	$y = 0$	$\frac{1}{2}$	90°	$\frac{1}{2}$	$-\frac{1}{2}$	$0^\circ \leq x \leq 180^\circ$	$-\frac{1}{2} \leq y \leq \frac{1}{2}$	0	$0^\circ, 45^\circ, 90^\circ, 135^\circ$ 180°

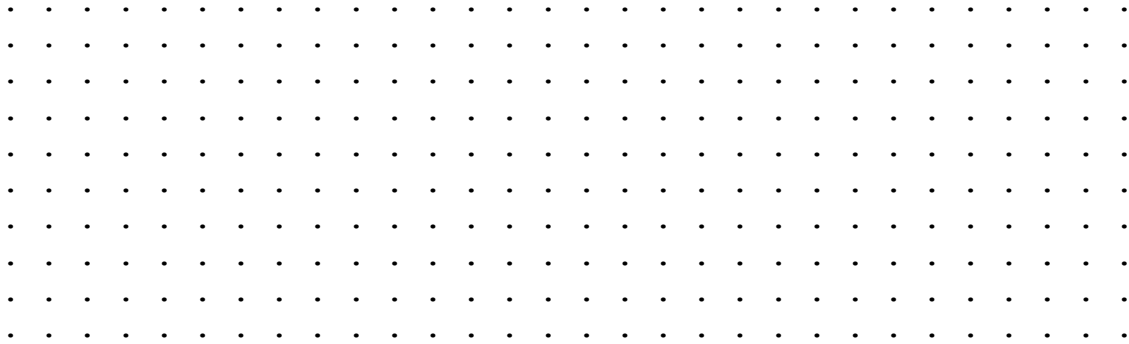
1



2



3



4

