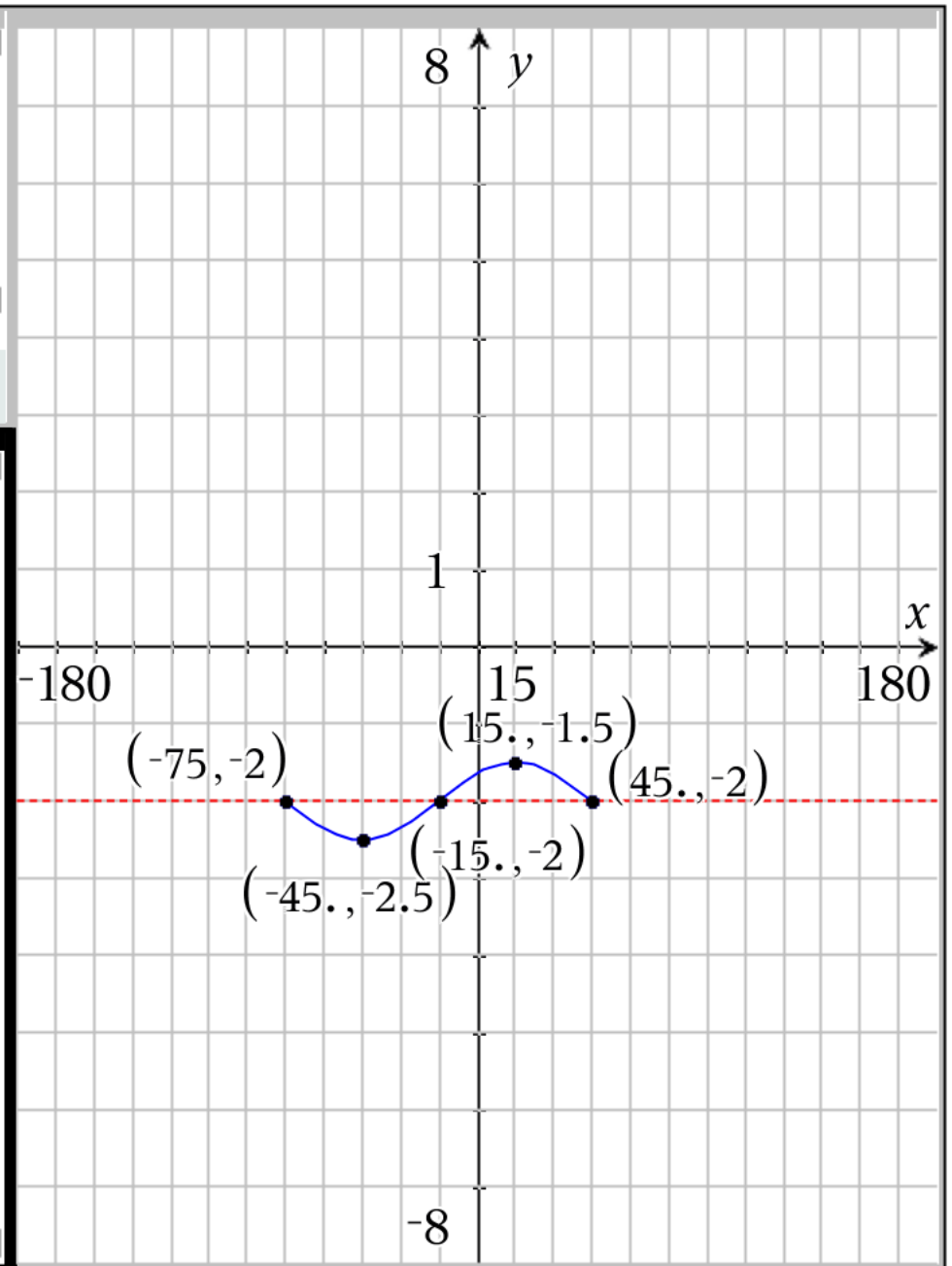
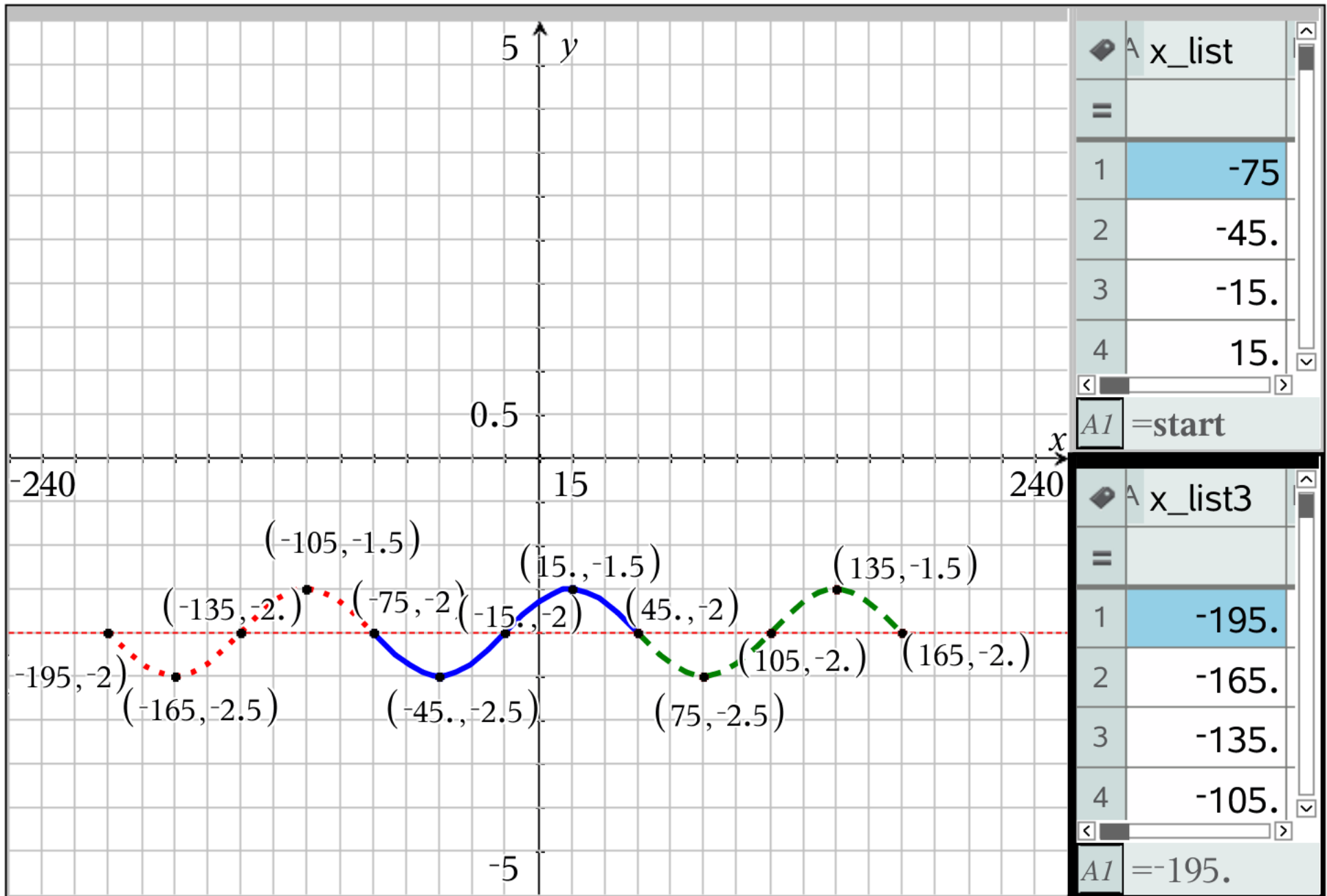


Problem 1

	A	B	C	D
=				
1	a		-1/2	
A1	a			

$y = \frac{-1}{2} \sin(3x + 225) - 2$
 $y = \frac{-1}{2} \sin(3(x + 75)) - 2$
 Period $[-75, 45.)$ Range $[\frac{-5}{2}, \frac{-3}{2}]$
 Amplitude $\frac{1}{2}$ Equation of Midline $y = -2$
 horizontal shift SHIFT LEFT
 vertical shift SHIFT DOWN
 compress horizontally
 compress vertically
 Reflection? NONE





Problem 2

A	B	C	D
=			
1 a		3	
A1	a		

$$y = 3 \sin(-2x + 60) - 1$$

$$y = 3 \sin(-2(x - 30)) - 1$$

Period [30, 210.) Range [-4, 2]

Amplitude 3 Equation of Midline $y = -1$

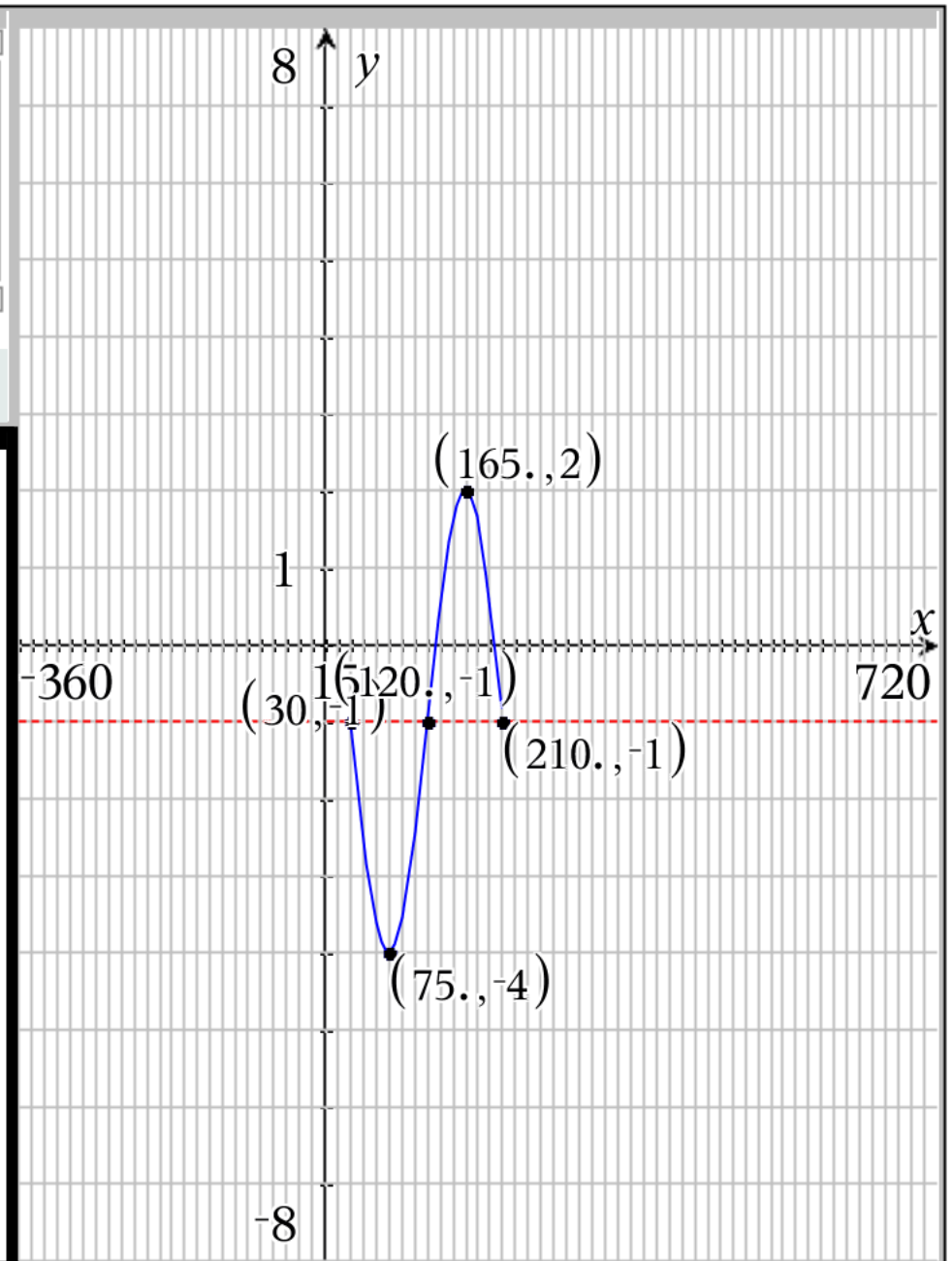
horizontal shift SHIFT RIGHT

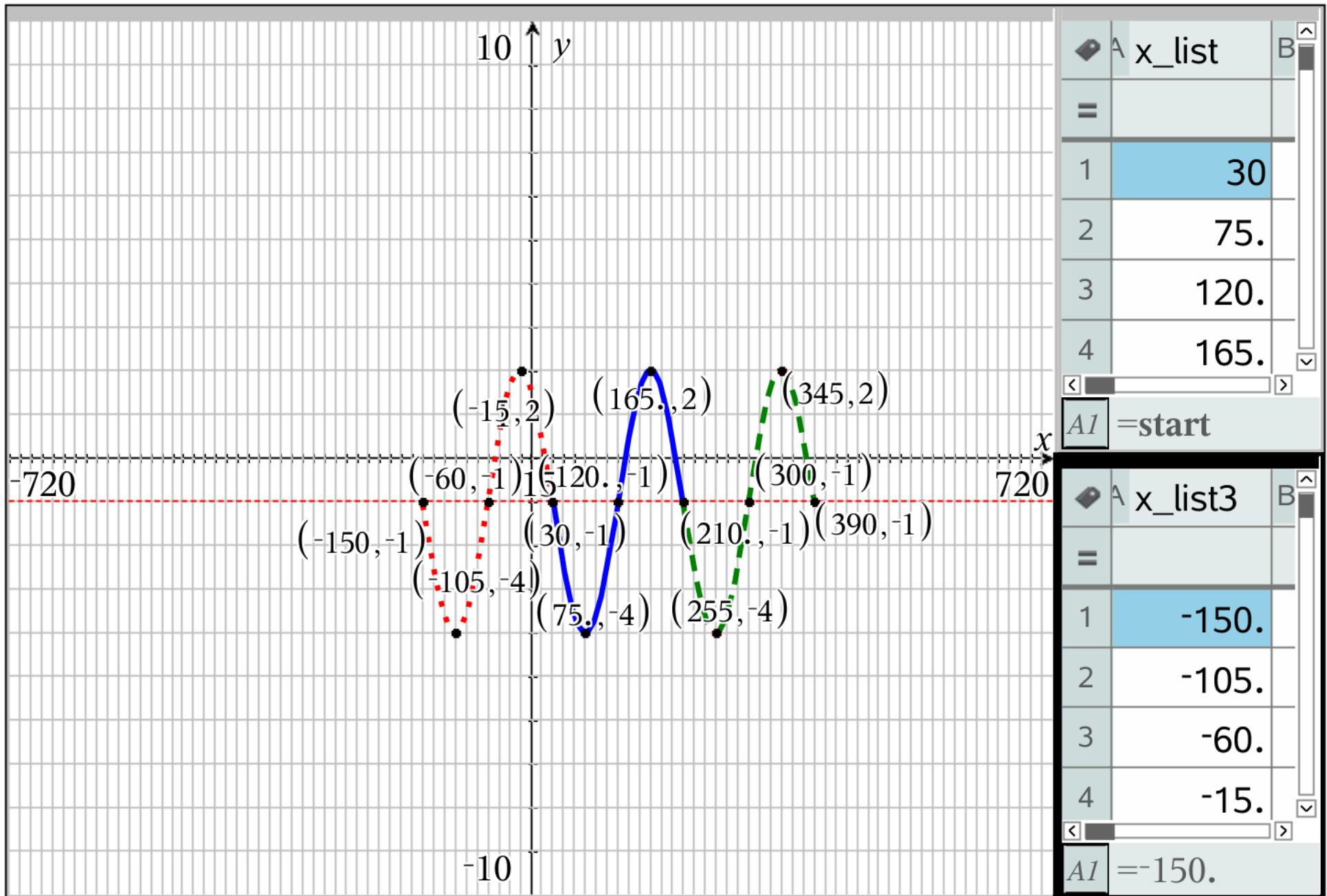
vertical shift SHIFT DOWN

compress horizontally

stretch vertically

Reflection? Vertical over y axis





Problem 3

	A	B	C	D
=				
1	a		3	
			15	
A1	a			

$$y = 3 \sin\left(\frac{1}{2}x + 120\right) - 2$$

$$y = 3 \sin\left(\frac{1}{2}(x + 240)\right) - 2$$

Period [-240, 480.) Range [-5, 1]

Amplitude 3 Equation of Midline $y = -2$

horizontal shift SHIFT LEFT

vertical shift SHIFT DOWN

stretch horizontally

stretch vertically

Reflection? none

