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

$y = 3\sin\left(\frac{2}{3}\left(x + \frac{3\cdot\pi}{4}\right)\right) + 2$

Period $\left[\frac{-3\cdot\pi}{4}, \frac{9\cdot\pi}{4}\right)$ Range $[-1, 5]$

Amplitude 3 Equation of Midline y =2

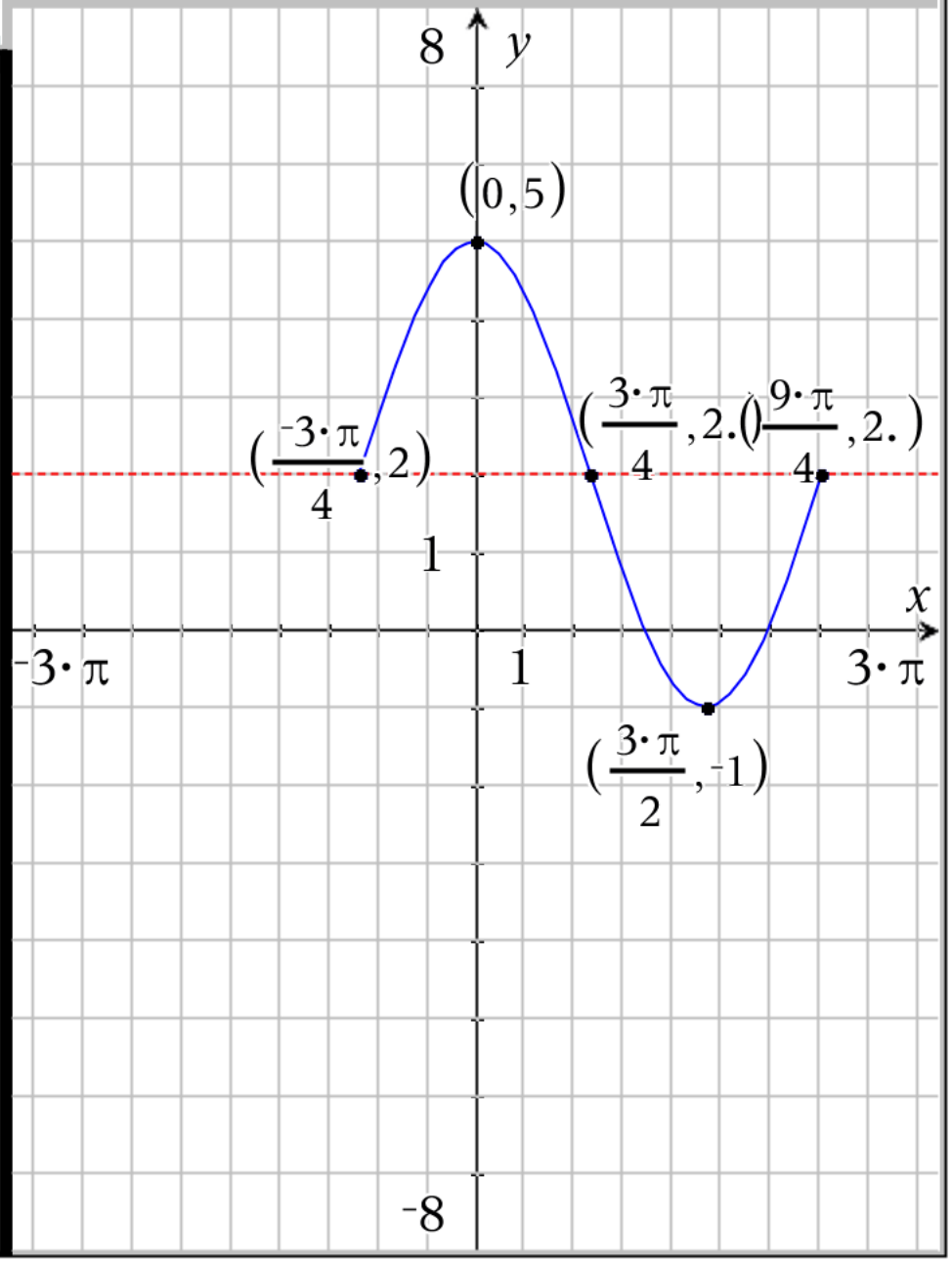
horizontal shift SHIFT LEFT

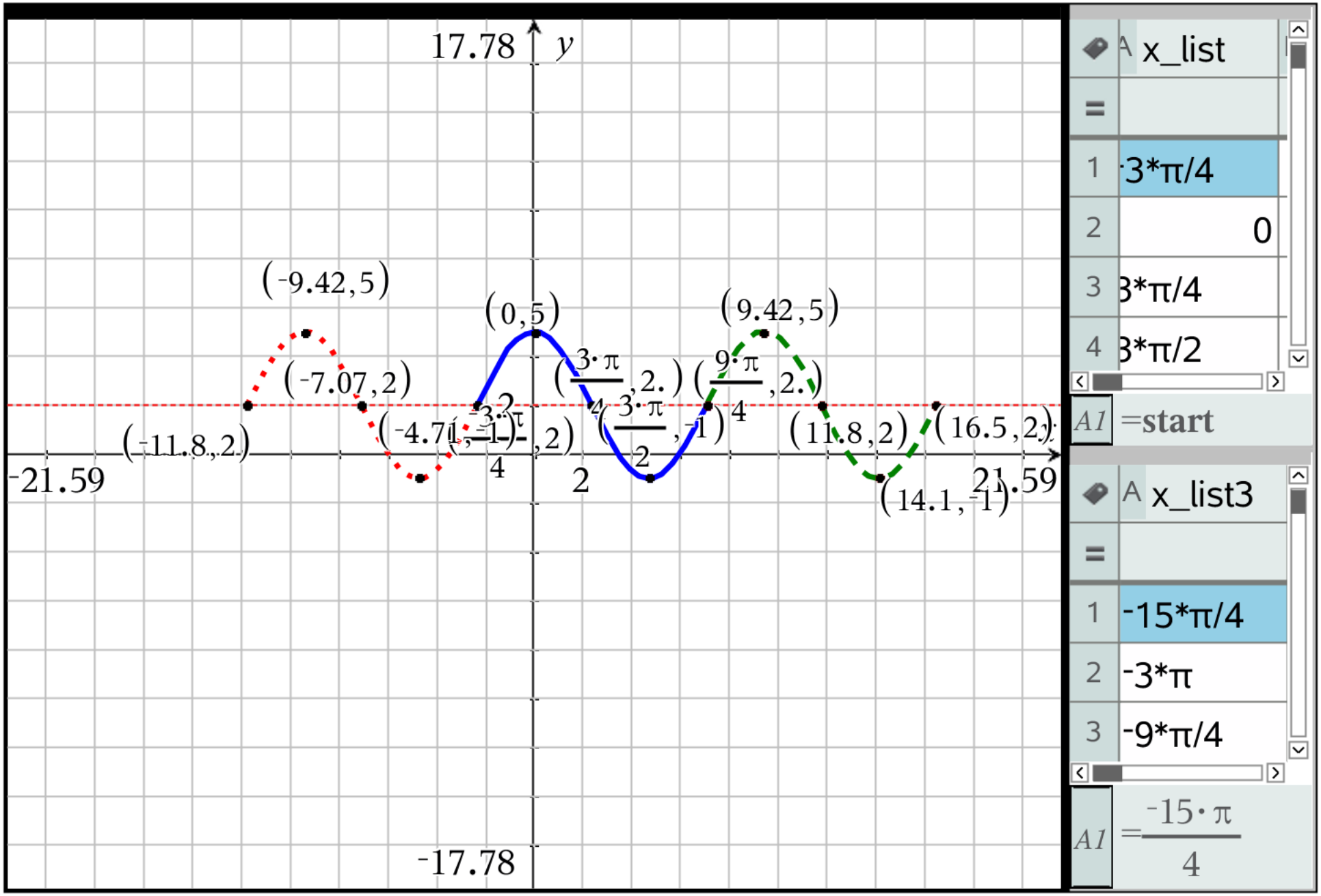
vertical shift SHIFT UP

stretch horizontally

stretch vertically

Reflection? NONE




17.78
y
-17.78
-21.59
21.59
(-9.42,5)
(0,5)
(9.42,5)
(-7.07,2)
(-11.8,2)
(-4.71,-1)
(11.8,2)
(16.5,2)
(14.1,-1)
x_list
1 -3*π/4
2 0
3 3*π/4
4 3*π/2
A1 =start
x_list3
1 -15*π/4
2 -3*π
3 -9*π/4
A1 =-15·π/4

A	B	C	D

A1 a

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

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

Period $[2,6)$ Range $[\frac{1}{2},\frac{7}{2}]$

Amplitude $\frac{3}{2}$ Equation of Midline $y=2$

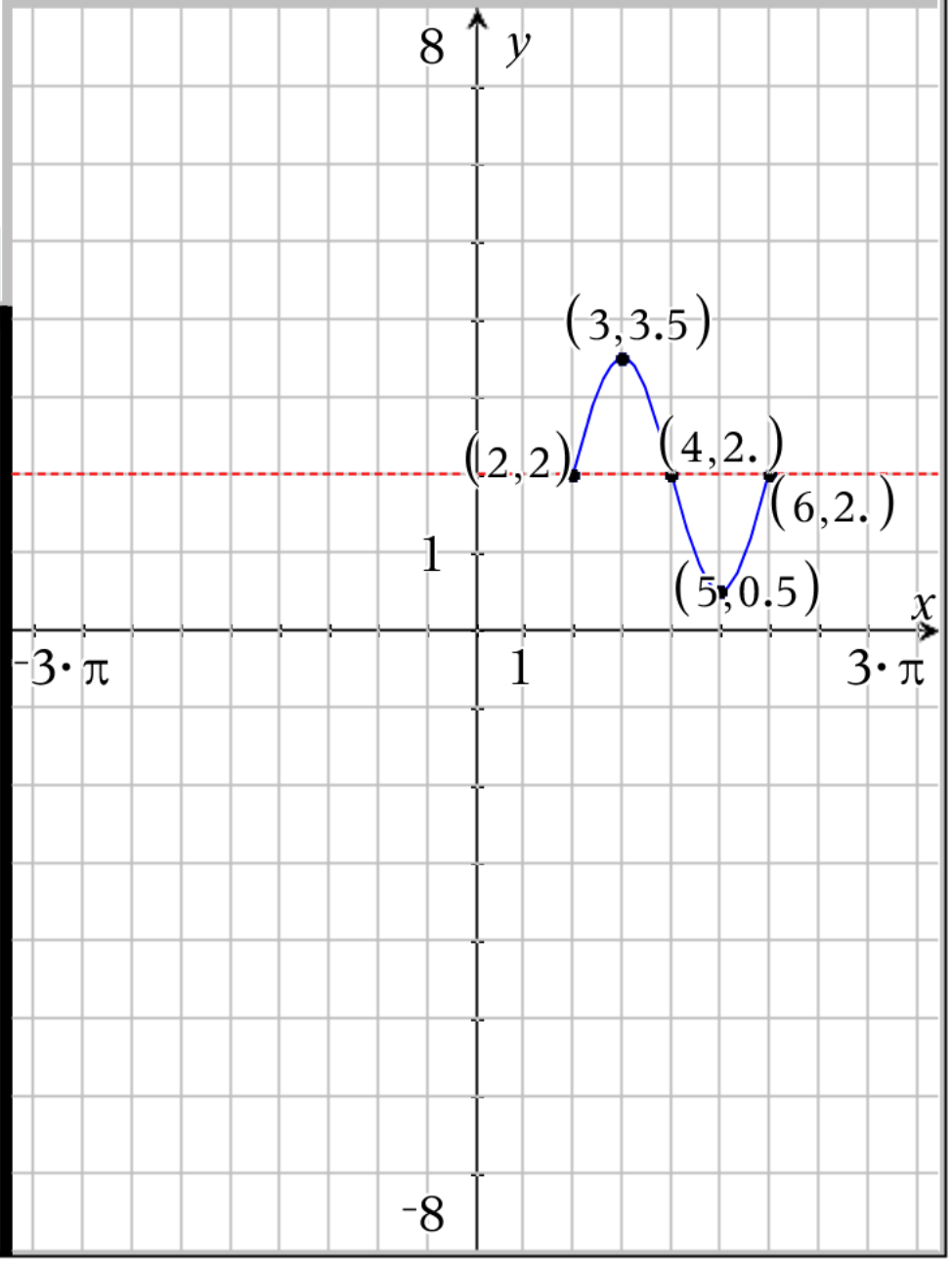
horizontal shift SHIFT RIGHT

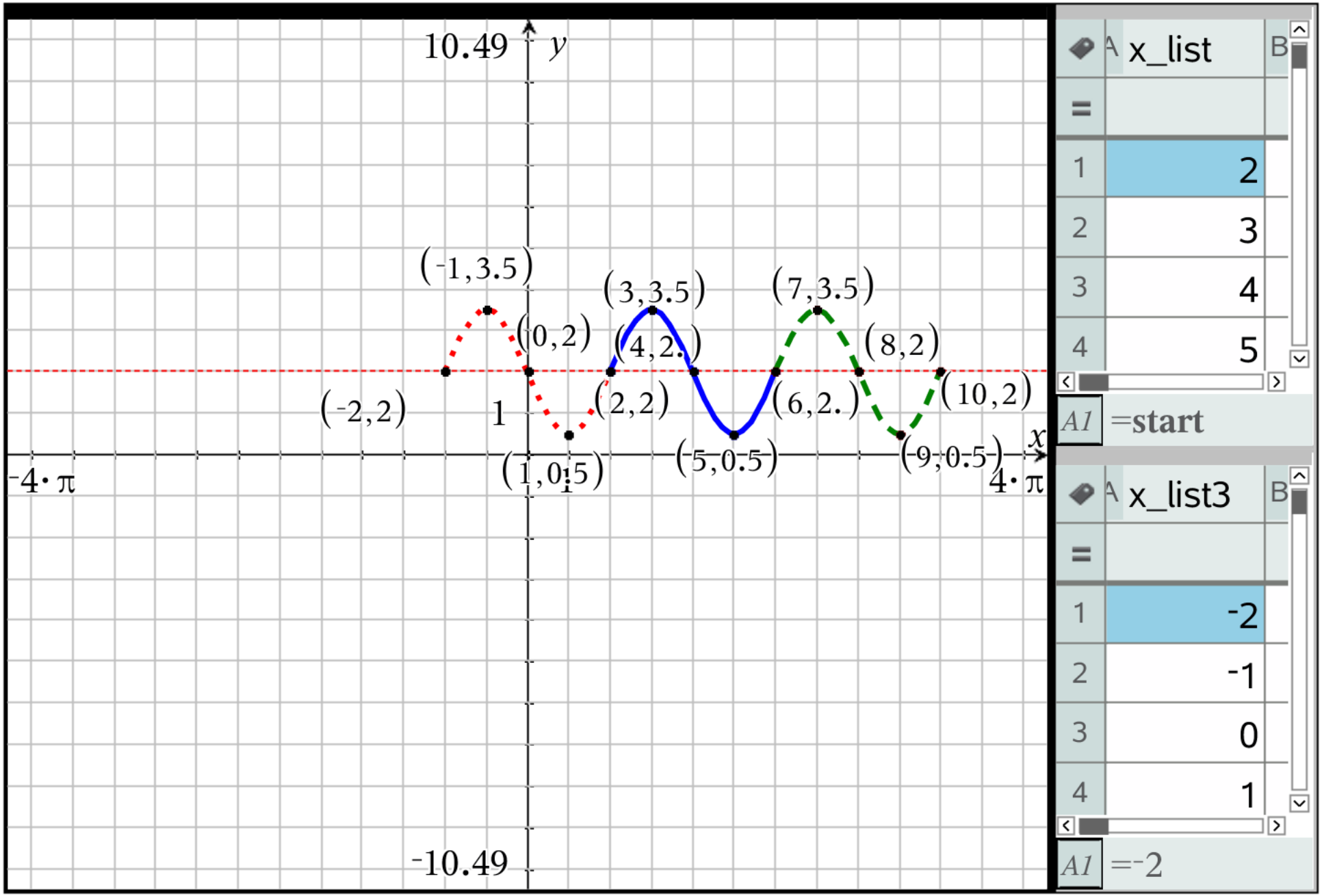
vertical shift SHIFT UP

compress horizontally

stretch vertically

Reflection? none




10.49
y
(-1,3.5)
(3,3.5)
(7,3.5)
(0,2)
(4,2.)
(8,2)
(-2,2)
1
(2,2)
(6,2.)
(10,2)
(1,0.5)
(5,0.5)
(9,0.5)
x
-4·π
4·π
-10.49
x_list
=
1 2
2 3
3 4
4 5
A1 =start
x_list3
=
1 -2
2 -1
3 0
4 1
A1 =-2