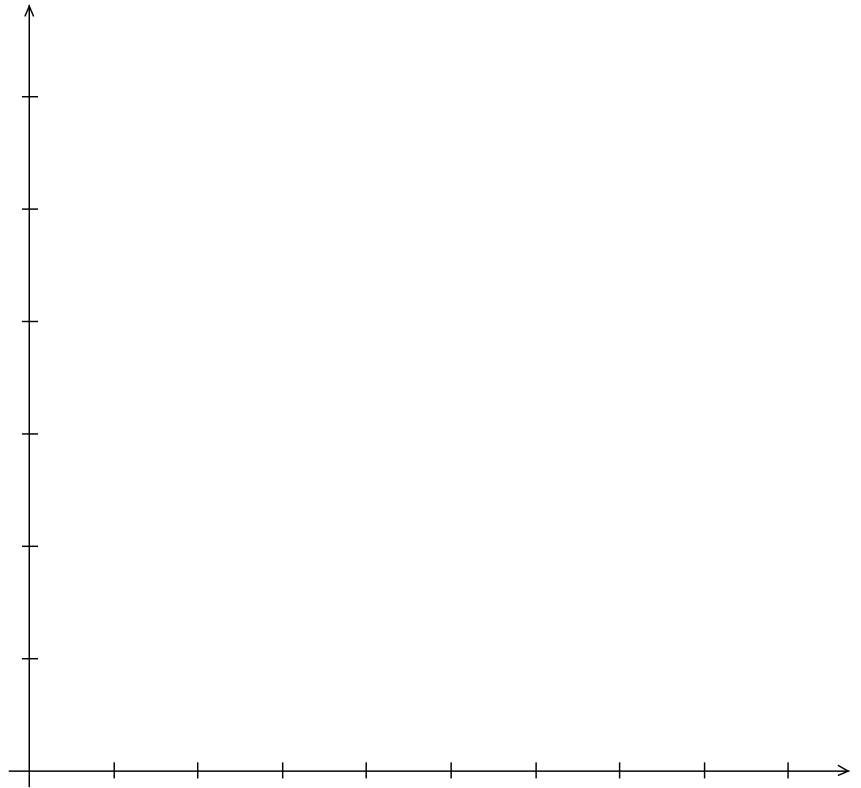


Emma, insisting on starting in more math problems, is riding a Ferris Wheel not knowing that Lizzy is at the controls. She quickly turns up the speed so that the wheel completes one cycle in 4 seconds. Lindsey knows that it's 4 seconds because she began timing it when Emma was at the bottom of one of her spins. The diameter of the wheel is 54 feet and the bottom of the wheel is 3 feet off the ground.

a) Write and graph a sinusoidal model for the wheel's motion (Section 2-1)



b) What is Emma's height off the ground at 8 seconds? (2-2)

c) Find the first three times that she was 45 feet off the ground? (2-2)