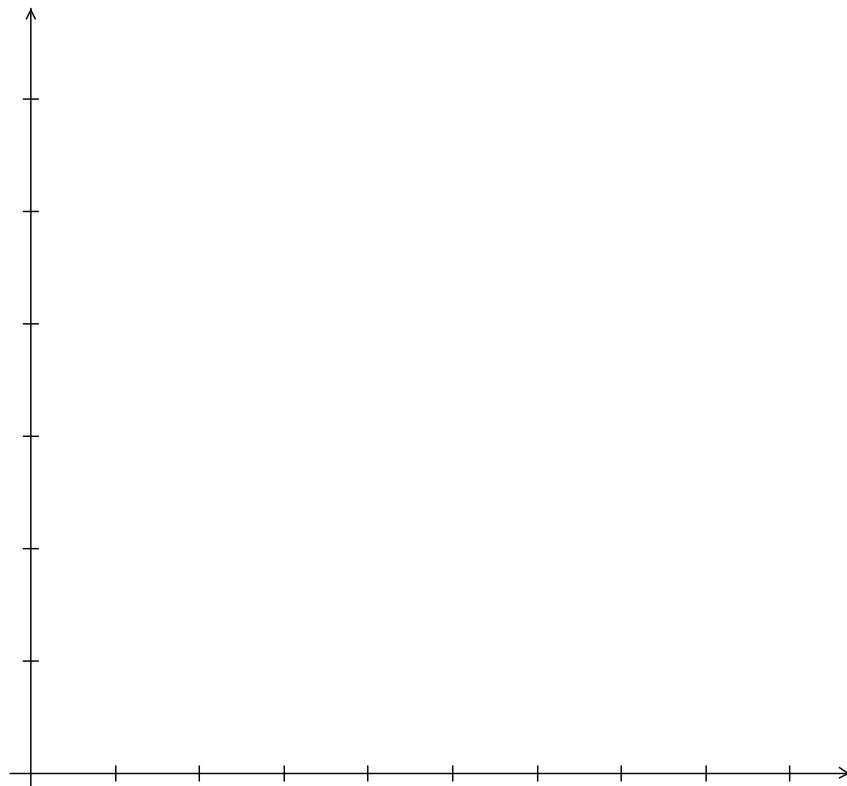


Rachel and Julia F are riding The SkyStar Wheel not knowing that Julia V is at the controls having achieved her dream of being able to run a Ferris wheel. She quickly turns up the speed so that the wheel completes one cycle in 4 seconds. She can tell that it's 4 seconds because she began timing it when she heard their screams as they passed the bottom of one of their 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 & 2-3)



b) What is their height off the ground at 8 seconds? (2-2)

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