Bray is riding a Ferris Wheel not knowing that Maggie is at the controls. She quickly turns up the speed so that the wheel completes one cycle in 4 seconds. David knows that it's 4 seconds because he began timing it when Bray was at the bottom of one of his 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 9-1)



b) What is Bray's height at 8 seconds (9-2)

$$y = 30 + 27\cos\left[\frac{1}{2}(8-2)\right]$$

= 3 ft

c) Find the first three times that Bray is 45 feet off the ground? (9-2)



Find the first three positive answers

How did I know this one?

Remember that after the the first two you need only add the period