

## 9.4 ferris wheel example.notebook

Gabe is riding a ferris wheel. The ferris wheel loads 5 feet above the ground and has a radius 50 feet. One revolution around the wheel takes 1 minute.

a) Sketch the situation and write the parametric equation that represents Gabe's path around the ferris wheel. Start at 3 o'clock on the wheel (50, 55).

b. Gabe and his friend Jason decide to play a complex game of catch. When Gabe gets to 3 o'clock on the wheel, Jason is going to throw a football to him. Jason is standing 75 feet from the base of the ferris wheel and throws the ball 80 ft/sec at an angle of  $110^\circ$ .

Write the parametric equation that represents the path of the football Jason throws. Assume he throws the ball from ground level.

c. What is the minimum distance between Gabe and the football?