

8. [5 points] The *I-Love-Functions Dog Hotel* has a one-of-a-kind Doggie Ferris Wheel for its residents to use on special occasions. The hotel residents board the Doggie Ferris Wheel at its lowest point, from a platform that is 5 feet high. The Doggie Ferris Wheel is 34 feet in diameter.

- a. [3 points] If each full rotation takes 1 minute, how high off of the ground is a dog when she is exactly 20 seconds into the ride?

Show all work (including any pictures). Give your final answer in decimal form, NOT exact form.

Height: _____feet

- b. [2 points] What length of the Doggie Ferris Wheel's arc is traversed by a passenger dog in 47 seconds of riding?

Show all work (including any pictures). Give your final answer in decimal form, NOT exact form.

Length of arc: _____feet