

Algebra 3: TI-84 Homework

DIRECTIONS: Using your TI-84 Notes on Solving Quadratics, solve the following questions.

1. You are an astronaut on the Moon. You hit a golf ball with your golf club. The height of the ball, $h(t)$, in meters, after time, t , is modeled by the function $h(t) = -0.81t^2 + 5t$. How long is it in the air for?
2. The engineers who designed an arch used the function $h(x) = -0.005061x^2 + 0.499015x$ to describe the height of the arch (h) a distance of x from each end. Determine the distance between the ends of the arch, and the height of the arch.
3. A bus company charges \$2 per ticket but wants to raise the price. The daily revenue is modeled by $R(x) = -30(x - 6)^2 + 34\,320$, where x is the number of \$0.15 price increases and $R(x)$ is the revenue in dollars. What should the price of the tickets be if the bus company wants to collect daily revenue of \$30,000?