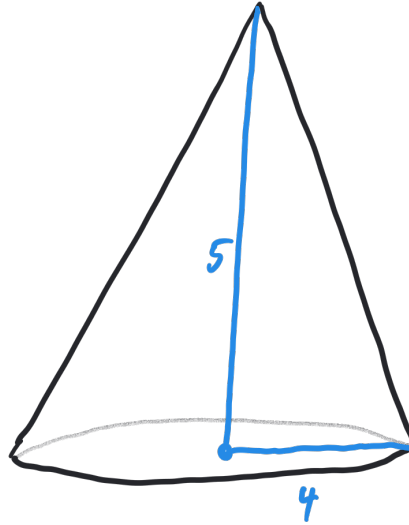


Problem 1. Find the volume of a cone of height 5 whose base is a circle with radius 4.



Problem 2. A rocket launches from the ground at time $t = 0$. Its velocity at time t in miles per hour is

$$v(t) = 6t^2.$$

What is the rocket's average velocity over its first two hours of flight? And what is its height after two hours?