1. A triangle has an area of $40 \mathrm{~cm}^{2}$. Find the height, $h$, of the triangle.
2. The length of a rectangular swimming pool is 20 ft greater than its width. The area of the pool is $525 \mathrm{ft}^{2}$. What are its dimensions?

Recall the Vertical Motion Model:
$h$ is $\qquad$
$s$ is $\qquad$
$\dagger$ is $\qquad$
$v$ is $\qquad$
3. While standing on the roof of a building that was 400 ft high, you dropped an egg. How many seconds will it take the egg to hit the ground?
4. How long would it take a hammer to hit the roof of a truck if the hammer was dropped from a height of 70 ft ? The roof of the truck is 6 ft high.
5. A football is kicked upward at a velocity of 42 ft per second ( $\mathrm{ft} / \mathrm{s}$ ). When will it reach a height of 20 ft ?
6. A soccer player kicks a soccer ball with a velocity of $32 \mathrm{ft} / \mathrm{s}$. If the ball reaches a height of 16 ft , how long does it stay in the air (total time)?
7. A monkey throws a coconut down from a tree with an initial velocity of $24 \mathrm{ft} / \mathrm{sec}$. If the monkey is 72 feet up in the tree, how long will it take for the coconut to hit the ground?

