### 5.14 Applications of Quadratic Equations <br> Continuation of Quadratic Equation notes

Ex 7: Your company is designing a steel frame in the shape of a rectangle. The Area is $1,280 \mathrm{~cm}^{2}$. The length is 5 times the width. Calculate the dimensions of the frame.

HW \#3:
If an object is propelled upward from a height of $h$ feet at an initial velocity of $v$ feet per second, then its height $S$ after $t$ seconds is given by the equation $\mathrm{S}=-16 \mathrm{t}^{2}+\mathrm{vt}+\mathrm{h}$, where S is in feet. If the object is propelled from a height of 12 feet with an initial velocity of 96 feet per second, its height $S$ is given by the equation $S=-16 t^{2}+96 t+12$.

After how many seconds is the height 120 feet?

