$\qquad$
$\qquad$ Modeling Linear Situations

A tree grows at a rate of 3.5 feet per year.

1. Identify the independent and dependent quantities and their unit of measure in this problem situation.
2. Suppose $t$ represents the time in terms of years and $h(t)$ represents the height of the tree in terms of feet over a period of time. Complete a table of values to describe this situation.

| $\boldsymbol{t}$ <br> (years) | $\boldsymbol{h}(\boldsymbol{t})$ <br> (feet) |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

3. Write an equation in function notation to represent the problem situation.
4. Sketch the graph of the problem situation and label the axes.

5. The HHS football booster club sells hot chocolate during varsity football games. Each cup of hot chocolate costs $\$ 2.50$. Write a function to represent this scenario.

$$
\begin{aligned}
& F(c)= \\
& F(6)= \\
& \hline
\end{aligned}
$$

