## Lesson 2.4 Notes

1) Jerry is half-way up a mountain at an altitude of 2,000 feet. He ascends the mountain and gains 50 feet of altitude per hour. If we assume that time zero is where he is right now, write a function $A$ that represents the altitude of Jerry after $h$ hours.

$$
A(h)=50 h+2000 \quad * * \text { Notice that I am using the variables requested. }
$$

2) Find $A(3)$. Explain what your solution means.

$$
\begin{aligned}
& A(3)=50(3)+2000=150+2000=2150 \\
& A(3)=2150
\end{aligned}
$$

This means that Jerry is at a height of 2,150 feet after 3 hours of climbing from the half-way point.
3) Does finding $A(-3)$ make sense in this situation? Why or why not?

In this situation, finding $A(-3)$ does make sense because Jerry was climbing the mountain prior to time zero, so we would just be finding his altitude 3 hours prior to being at the half-way point.
4) Steven invests $\$ 5,000$ into an account that earns $4.5 \%$ interest per year. Write a function $T$ that represents the amount in the account after $y$ years.

$$
T(y)=1.045^{y} \cdot 5000 \quad * * \text { Notice that I am using the variables requested. }
$$

5) Find $T(7)$. Explain what your solution means.
$T(7)=1.045^{7} \cdot 5000 \approx 6804.31$
$T(7)=6804.31$
This means that Steven will have $\$ 6,804.31$ in the account after 7 years.
6) Does finding $T(-1)$ make sense in this situation? Why or why not?

In this situation, finding $T(-1)$ does not make sense because there was no money in the account prior to when Steven opened the account.

