

**LESSON  
1.1****Real-Life Application:  
When Will I Ever Use This?***For use with pages 2–9***World's Highest Waterfall**

The world's highest waterfall is located in the Canaima National Park, on a branch of the Carrao River in southeast Venezuela. This waterfall, called the Angel Falls, plunges from the top of a mesa. The Angel Falls mesa is one of over a hundred of its kind, which are scattered about the Guiana Highlands of southeast Venezuela. The main characteristic of the mesas is their massive heights, each with a flat top and vertical sides. Also called *table mountains*, these mesas were formed out of sandstone over a billion years ago. The great elevation of the isolated mesas has made them into biological islands. The waters from the heavy rainfall of the Rainforest are continually eroding the vertical sides of the mesas.

In 1935 Jimmy Angel, a United States bush pilot, was flying over this area in Venezuela, when he landed on the top of a mountain in search of gold. His plane was stuck in the boggy jungle on top of the mountain. It was here that he noticed an impressive waterfall plunging down thousands of feet. His plane remains stuck upon the mountain as a monument to his discovery. This waterfall became known as Angel Falls, after the American pilot who discovered it.

1. The Angel Falls has a total drop of 3212 feet with the longest single drop of 2648 feet. Find the height of both drops in miles, yards, and inches. Give your answers to two significant digits.
2. The Angel Falls has a total drop of 3212 feet. The Eiffel Tower is 1045.59 feet high. The length of the Golden Gate Bridge is 6450 feet. The Empire State Building is 1453.71 feet high. Order these heights from greatest to least. Use the symbol  $<$  or  $>$  to show the relationship.

**In Exercises 3 and 4, use the following information.**

The exchange rate is 2144.60 Venezuelan bolivars per U.S. dollar. There is no fee to make an exchange.

3. A local tour guide has offered to lead your expedition to the Angel Falls for 3,056,000 Venezuelan bolivars. How much money in U.S. dollars is the tour guide charging your group?
4. You decide to give your guide an additional \$250 in U.S. dollars. How much are you giving him in Venezuelan bolivars?
5. An expedition climbs to the top of Angel Falls at an average rate of 0.25 mile per hour. How long does it take to expedition to climb to the top of Angel Falls?
6. After one hour of climbing at an average rate of 0.25 mile per hour, the expedition takes a break. How far has the expedition climbed, in feet?
7. After two hours of climbing at an average rate of 0.25 mile per hour, the expedition takes a break. How much further does the group have to climb, in feet, to reach the top of the waterfall?