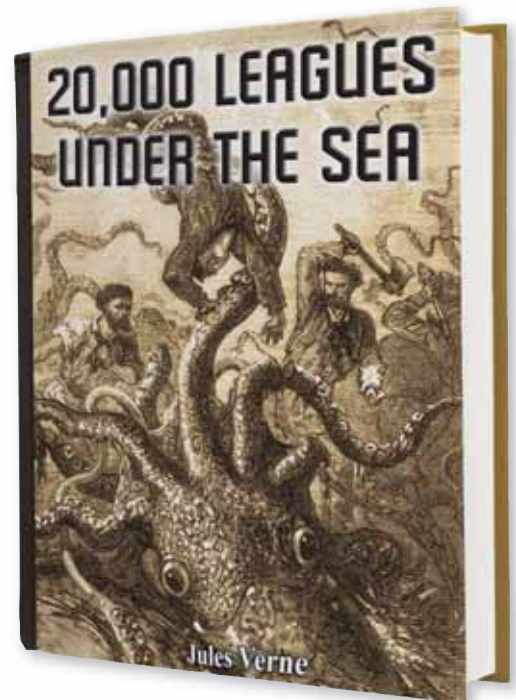## Section 1.4

Nautical Units In Exercises 21–26, use the table.

21. During the U.S. Civil War, the Confederate ironclad CSS *Virginia* clashed with the Union ironclad USS *Monitor* in the Battle of Hampton Roads. The speed of the *Monitor* was about 9 miles per hour, and the speed of the *Virginia* was about 6 knots. Which ship was faster?

1 fathom = 2 yards
1 nautical mile ≈ 1013 fathoms
1 nautical mile ≈ 1.15 miles
1 league = 3 nautical miles
1 league ≈ 3.45 miles
1 knot = 1 nautical mile/hr

22. The phrase "deep six" means to throw something away. It was originally used by boaters to mean 6 fathoms. Convert this depth to feet.

23. Territorial waters around the United States used to be defined by the reach of a cannon ball fired from shore, or a "cannon shot." One cannon shot was defined as 3 nautical miles.

   a. Convert 1 cannon shot to miles.

   b. Compare this definition of territorial waters to the modern definition.

24. Jules Verne wrote a famous novel called *20,000 Leagues Under the Sea.*

   a. Convert 20,000 leagues to miles.

   b. At its deepest point, the ocean is about 7 miles deep. What do you think the title of Verne's novel means? Explain your reasoning.

25. Below is an excerpt from William Shakespeare's *The Tempest*.

> *Full fathom five thy father lies;*
> *Of his bones are coral made;*
> *Those are pearls that were his eyes;*
> *Nothing of him that doth fade*
> *But doth suffer a sea-change*
> *Into something rich and strange.*

Shakespeare writes that the man lies 5 fathoms deep. Convert this depth to feet.

26. Mark Twain was the pen name of Samuel Clemens, who spent several years as a steamboat pilot. He chose the name because the leadsman on a steamboat would call out "mark twain" to indicate that the water depth was 12 feet and safe for the boat to pass. Convert this depth to fathoms.