



Personal Tutors

Chapter 1

Personal Tutor Activity 1.1 - Find Real-World Volumes

- 1. Apply** A fuel company has to purchase new tanks to hold a special kind of fuel. The new tanks have a diameter of two feet and a height of four feet. Use the equation for finding the volume of a right cylinder ($V = \pi r^2 h$) to estimate how many gallons of fuel each of the new tanks will hold. Then determine how many tanks will be required to hold 1000 gallons of fuel (Note: 1 gallon is approximately 231 in^3).
- 2. Starting Hint** Write out the equation first, and then write the numbers you know underneath each part.

Personal Tutor 1.2 - Solve a Two-Step Verbal Problem

- 1. Apply** Heather, a new engineering intern, has to complete 100 scaled drawings by the end of March. She was able to complete 16 drawings during her training session in February. If she wants to have all 100 drawings complete by the end of her fourth work week, how many drawings must she complete each week? How would this number change if she wanted to finish them by the end of the third week?
- 2. Starting Hint** Assume that Heather works a standard five-day work week for the four weeks in March.