



Number

sense

# Benchmarks for Estimation: *A Million Dollars and the Cost of Living*

Is a million dollars really a lot of money? How long would it take you to earn that much? How far would it go? Starting with small numbers and building up to larger ones is a strategy that helps with estimation. Once you have found one number, you can use that as a benchmark or guideline to estimate other larger numbers.

In surveying, a *benchmark* is the point of a known elevation that surveyors use to establish other elevations.



## **MATERIALS**

pencil and paper  
calculators

## **WHAT'S THE MATH?**

Large numbers; rates;  
everyday living expenses.

### **How**

#### **A Million Dollars**

- With your family discuss how long it would take you to earn a million dollars.
- Suppose you worked for \$5 an hour, 8 hours a day, 5 days a week for 50 weeks a year? What if you earned \$15 an hour? \$20,000 a year? \$40,000 a year? \$60,000 a year?

#### **Cost of Living**

- Could you afford to live in your own apartment if you earned \$5 an hour? Could you afford a car as well? Discuss what information you would need to figure this out.
- Look in your local newspapers for information on how much studios and one-bedroom apartments rent for in your area. Who usually pays for the utilities (gas, electricity, water, and garbage)? You or the landlord? How could you find out how much they would cost each month? Check out how much a used car costs. Call an insurance company to find out how much you would have to pay for insurance. Bring the information for the next class.
- If \$5 an hour is not enough to cover renting your own apartment and having a car, how much do you think you would need?
- If you decide to live at home, what would be a fair amount for you to pay for your share of food and utilities? ■

Please email your responses  
to your math teacher.