

# POWERS, ROOTS, AND RADICALS

► *How can you estimate the weight of a dinosaur?*



## CHAPTER

# 7

### APPLICATION: Dinosaurs

**S**cientists have determined relationships between the bone measurements and the heights and weights of living animals. By applying the relationships to dinosaur bones, scientists can estimate heights and weights of these prehistoric animals.

#### Think & Discuss

The table below gives the femur circumference (in millimeters) and estimated weight (in kilograms) for four different dinosaurs that walk on two feet.

Femur circumference	Estimated weight
103	50
201	310
348	1400
504	3800

1. Graph the ordered pairs (*femur circumference*, *estimated weight*) from the table. Why can't you model the data with a linear function?
2. The femur circumference of a *Hypacrosaurus altispinus* is about 400 millimeters. Estimate a reasonable weight for this dinosaur. How did you derive your estimate?

#### Learn More About It

You will apply the relationship between femur circumference and weight to a *Tyrannosaurus rex* in Exercise 64 on p. 442.



**APPLICATION LINK** Visit [www.mcdougallittell.com](http://www.mcdougallittell.com) for more information about dinosaurs.

