

NAME: \_\_\_\_\_

## UNIT 3 • LINEAR AND EXPONENTIAL FUNCTIONS

### Lesson 8: Arithmetic and Geometric Sequences

---

#### Problem-Based Task 3.8.2: Glass Recycling

The school Recycling Club collected 39.6 pounds of glass on the second day of a collection drive. The members collected 57.024 pounds of glass on the fourth day. The club estimates that the number of pounds collected will form a geometric sequence. Write an explicit formula to represent this scenario. How many pounds of glass, to the nearest tenth of a pound, should the Recycling Club expect to collect on their sixth day of the collection drive?

## UNIT 3 • LINEAR AND EXPONENTIAL FUNCTIONS

### Problem-Based Task 3.8.2: Glass Recycling

## Coaching

- What equation can you write using the information about the second day of the collection drive?
- What equation can you write using the information about the fourth day of the collection drive?
- How can you use the two equations to find the constant ratio?
- What is the explicit formula for the geometric sequence?
- Using the rule to estimate, about how many pounds of glass, to the nearest tenth of a pound, should the Recycling Club expect to collect on their sixth day of the collection drive?