



Objective: REVIEW

Day 1

I. Write Complex Rates and Unit Rates

A. Write each as a fractional rate.

1. A cell phone company mistakenly advertises that their data plan costs "0.02 cents" for every kilobyte of data.
2. Sue's Stop-n-Shop advertises that 12-ounce sodas are "0.99 cents" each.
3. A carnival game advertises "0.50 cents" for a ring toss.
4. At a yard sale, Enzo sees a sign that advertises "0.05 cents" per used book.
5. School Supplies R Us is having a back-to-school sale and advertises in the local paper that pencils are "0.88 cents" a pack.
6. Wesley's Wings and More advertises that wings are "0.25 cents" each on Monday nights.
7. A fast-food restaurant has a sign that water is "0.20 cents" for one cup.
8. A recycling center claims to give "0.04" cents for every aluminum can turned in.

B. Write each fractional rate as a unit rate.

1. $\frac{1}{2}$ cup for 3 batches
2. 5 miles in $1\frac{1}{2}$ hours
3. $\frac{2}{3}$ pound for every $\frac{1}{4}$ tablespoon
4. $2\frac{3}{4}$ gallons in $3\frac{2}{3}$ minutes
5. 6 pages every $\frac{1}{5}$ hour
6. $\frac{5}{6}$ yard for 4 dresses

II. Comparing Unit Rates

A. Answer each question by comparing unit rates.

1. Marcus can type 40 words in half a minute. Rhys can type 100 words in one and a half minutes. Which student can type at a greater rate of words per minute?
2. Yumi takes $\frac{5}{12}$ hour to complete 50 math problems. Eric is able to complete 48 math problems in $\frac{2}{5}$ hour. Which student can complete math problems at a greater rate of problems per hour?
3. Maggie's home computer downloads a 7 megabyte program in $\frac{5}{6}$ minute. Brooke's home computer takes $1\frac{1}{4}$ minutes to download a 9 megabyte program. Whose computer downloads at a greater rate of megabytes per minute?
4. Caitlin travels for $1\frac{1}{3}$ hours to visit a friend who lives $4\frac{1}{2}$ miles away. Martin travels $4\frac{1}{4}$ miles to visit a friend. It takes him $1\frac{1}{5}$ hours to get there. Who travels at a greater rate of miles per hour?
5. Beth drove 45 miles and used $3\frac{3}{4}$ gallons of gas. Martha drove 85 miles and used $5\frac{2}{3}$ gallons of gas. Which driver used fewer gallons of gas per mile?
6. Steve baked $5\frac{1}{2}$ batches of cookies in one and one half hours. Vondra baked $3\frac{1}{3}$ batches of cookies in $\frac{11}{12}$ hour. Which baker made cookies at a greater rate of batches per hour?

III. Solving Proportions Using Equivalent Ratios

A. Solve each problem by setting up and solving a proportion. Use equivalent ratios to solve the proportion.

1. The human body is often drawn using specific ratios. The average height of an adult is drawn using 7 head lengths (the height of the head is $\frac{1}{7}$ the total height). If a person in a painting is 63 centimeters tall, how tall is the person's head?
2. The Appalachian Trail is a 2,155-mile hiking trail in the Eastern United States. You plan to hike the section of the trail that is in New Jersey at a rate of 9 miles per day. If the hike will take you 8 days, what is the length of the trail in New Jersey?

