Further investigations:
Here are some activities you and your student can do together:
Convert batting averages to percents and fractions in lowest terms.
List five items on a grocery receipt in order from least to greatest. List five other items in order from greatest to least. Calculate the tax paid on your purchases.
Practice halving, doubling and tripling the amount of ingredients in recipes that contain fractional measures.
Read ads and calculate prices for items on sale for 10%, 25%, or 50% off.
Calculate tips at restaurants and taxes for items purchased at retail stores.
Calculate the fraction, decimal, and percent of wins for your favorite team.

Fractions, Decimals, Ratios and Percents
Students will:
- Use fractions, decimals, and percents interchangeably
- Order and compare rational numbers
- Operate with fractions, decimals, and percents
- Use ratios to compare quantities and solve problems

Classroom Cases:
1. Perform the indicated operations. Write your answers in simplified fractional form and then in equivalent decimal and percent forms.
   a. Add: $\frac{3}{5} \times \frac{1}{4}$
   b. Subtract: $4 \frac{1}{4} - 3 \frac{1}{8}$
   c. Multiply: $5 \frac{1}{3} \times 2 \frac{1}{4}$
   d. Divide: $4 \div 2 \div 3$

   Case Closed - Evidence:
   a. $\frac{3}{5} + \frac{1}{4} = \frac{13}{20} = 0.65 = 65\%$
   b. $3 \frac{1}{4} - 3 \frac{1}{8} = 2 \frac{5}{8} = 2.625 = 262.5\%$
   c. $5 \frac{1}{3} \times 2 \frac{1}{4} = \frac{5}{3} \times \frac{9}{4} = \frac{45}{12} = \frac{15}{4} = 3 \frac{3}{4} = 3.75 = 375\%$
   d. $4 \div 2 \div 3 = \frac{4}{6} = \frac{2}{3} = 0.666\ldots = 66.6\%$

2. Jamil completed 82% of the problems assigned. Patrice finished $\frac{7}{8}$ of the problems. Lamar did 17 out of 20 problems. Who did the most if they were all working on the same assignment?

   Case Closed - Evidence:
   Since $\frac{7}{8} = 87.5\%$ and $17 \div 20$ is equivalent to $0.85$ which is equal to 85%, Patrice did the most problems.

3. Write a math expression you would use to represent each situation.
   a. What is the area of a rectangular plot that is $\frac{3}{4}$ mile long and $\frac{1}{2}$ mile wide?
   b. How many glasses of water can you pour from $\frac{4}{5}$ of a jug if $\frac{1}{10}$ of a jug will fill 1 glass?

   Case Closed - Evidence:
   a. $\frac{3}{4} \times \frac{1}{2}$
   b. $\frac{4}{5} \div \frac{1}{10}$

4. You treated your mother to lunch on her birthday. You paid $5.45 for her lunch and $4.85 for your lunch. If you left a 15% tip, how much did you pay altogether?

   Case Closed - Evidence:
   $5.45 + 4.85 = 10.30$
   $10.30 \times 0.15 = 1.545$
   $10.30 + 1.545 = 11.845$

5. In a survey on favorite fruits, 18 people chose apples, 12 chose oranges, and 10 picked pears. What percent preferred pears?

   Case Closed - Evidence:
   $\frac{10}{18+12+10} = \frac{10}{40} = \frac{1}{4} = 0.25 = 25\%$

6. Roger’s mother baked banana bread. His sister took $\frac{1}{4}$ of the loaf to eat with her lunch. Roger’s mother left a note for Roger saying that he could eat $\frac{1}{3}$ of what was left. Roger did what the note said. How much of the loaf of banana bread was left after Roger ate his portion?

   Case Closed - Evidence:
   1 loaf -$\frac{1}{4}$ loaf = $\frac{3}{4}$ loaf remaining after sister’s lunch
   $\frac{1}{3} \times \frac{3}{4} = \frac{1}{4}$ loaf --- amount Roger ate
   1 loaf - $\frac{1}{4}$ loaf - $\frac{1}{4}$ loaf = $\frac{1}{2}$ loaf left

Book’em:
Dad’s Diet by Barbara Comer
One Riddle, One Answer by Laura Thompson

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