



Grade 4

Topic: Decomposing Fractions

Instructions

Break down each fraction into a sum of smaller fractions with the same denominator. Write your answer in two different ways if possible. Solve the word problems at the end.

Decomposing Fractions into a Sum of Fractions

Example: $\frac{5}{8} = \frac{2}{8} + \frac{3}{8}$ or $\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

1. $\frac{7}{10} =$ _____

2. $\frac{4}{6} =$ _____

3. $\frac{9}{12} =$ _____

4. $\frac{6}{8} =$ _____

5. $\frac{5}{9} =$ _____

Fill in the Missing Fractions

Complete the decomposition by filling in the blanks:

1. $\frac{8}{10} = \frac{4}{10} + \underline{\hspace{2cm}}$

2. $\frac{5}{7} = \frac{2}{7} + \underline{\hspace{2cm}}$

3. $\frac{10}{12} = \frac{5}{12} + \underline{\hspace{2cm}}$

4. $\frac{9}{15} = \frac{3}{15} + \underline{\hspace{2cm}}$

5. $\frac{11}{20} = \frac{6}{20} + \underline{\hspace{2cm}}$

Word Problems

1. Sarah baked a cake and cut it into 8 equal slices. She ate $\frac{3}{8}$ of the cake and gave $\frac{2}{8}$ to her friend. How can we express the total amount eaten as a sum of fractions?
2. A farmer has a field divided into 12 equal sections. He planted carrots in $\frac{5}{12}$ of the field and potatoes in $\frac{4}{12}$. Express the total portion of the field used as a sum of fractions.
3. Lisa walked $\frac{7}{10}$ of a mile in the morning and $\frac{2}{10}$ of a mile in the evening. Write a fraction equation to show how much she walked in total.

Bonus Challenge

Can you decompose $\frac{8}{12}$ into at least three different sets of fractions? Write them below:

1. $\underline{\hspace{2cm}}$

2. $\underline{\hspace{2cm}}$

3. $\underline{\hspace{2cm}}$

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