

4th Grade Fraction Study Guide  
Unit 10–11 Review

WHAT WE ARE LEARNING

- Represent mixed numbers and improper fractions
- Add and subtract mixed numbers with like denominators
- Multiply a whole number by a unit fraction
- Use models to explain thinking

PART 1: Mixed Numbers & Improper Fractions

A mixed number has a whole number and a fraction.

Example:  $1\frac{3}{4}$

An improper fraction is greater than 1.

Example:  $\frac{7}{4} = 1\frac{3}{4}$

Practice:

1. Draw a model to show  $2\frac{5}{8}$ .
2. Write as an improper fraction:  $2\frac{3}{4} = \underline{\hspace{2cm}}$
3. Write as a mixed number:  $\frac{11}{3} = \underline{\hspace{2cm}}$
4. Which expression shows  $1\frac{3}{4}$ ?
  - a.  $\frac{1}{4} + \frac{3}{4}$
  - b.  $\frac{4}{4} + \frac{3}{4}$
  - c.  $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$
  - d.  $\frac{4}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

PART 2: Adding and Subtracting Mixed Numbers

1.  $5\frac{1}{4} + 2\frac{3}{4} =$

2.  $6\frac{1}{2} + 8\frac{1}{2} =$

3.  $3\frac{2}{6} + 7\frac{5}{6} =$

4.  $10\frac{1}{5} - 4\frac{4}{5} =$

5.  $12\frac{2}{3} - 3\frac{1}{3} =$

6.  $4\frac{2}{7} - 2\frac{3}{7} =$

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PART 3: Word Problems

1. Jack used  $1\frac{1}{4}$  gallons and then  $\frac{3}{4}$  gallon. How many gallons total?
2. Sandy walked  $2\frac{4}{6}$  miles and then  $2\frac{3}{6}$  miles. How far did she walk?
3. A baker used  $2\frac{3}{5}$  cups of flour in the morning and  $\frac{1}{5}$  cup in the afternoon. How much flour did the baker use in total?
4. A rope is  $9\frac{1}{4}$  meters long.  $1\frac{3}{4}$  meters are cut off. How much rope is left?
5. A board is  $10\frac{2}{3}$  feet long. A carpenter cuts off  $5\frac{1}{3}$  feet. How much board remains?

PART 4: Multiplying a Whole Number by a Unit Fraction

A unit fraction has 1 in the numerator.

Example:  $\frac{1}{4}$

$3 \times \frac{1}{4}$  means:

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

1.  $3 \times \frac{1}{4} = \underline{\hspace{2cm}}$

2.  $2 \times \frac{1}{5} = \underline{\hspace{2cm}}$

3. Trisha walked 7 times around the hallway. Each time was  $\frac{1}{10}$  mile. How far did she walk?  $\underline{\hspace{2cm}}$

PART 5: Models & Thinking

1. Draw a number line to show  $2 \times \frac{1}{4}$ .
2. Draw a model for  $1\frac{3}{4}$ .
3. What mistake is shown here? Explain your thinking:  $1\frac{1}{4} + 2\frac{1}{4} = 3\frac{2}{8}$