

Grade 4 • Unit 3 Worksheet

Extending Operations to Fractions

Name: _____

Date: _____

Part A • Multiplying Fractions by Whole Numbers

1. Find each product. Draw a picture or use a number line to show ONE of them.

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

$$5 \times \frac{1}{8} = \underline{\hspace{2cm}}$$

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

$$6 \times \frac{3}{10} = \underline{\hspace{2cm}}$$

Picture for one of the above:

-
2. Mai sees 4 plates with $\frac{1}{3}$ of a sandwich on each. How much sandwich is there in all?

Expression: $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Total: $\underline{\hspace{2cm}}$ sandwiches

Part B • Adding and Subtracting Fractions (Like Denominators)

3. Find each sum or difference.

$$\frac{3}{8} + \frac{4}{8} = \underline{\hspace{2cm}}$$

$$\frac{5}{6} - \frac{2}{6} = \underline{\hspace{2cm}}$$

$$\frac{7}{10} + \frac{5}{10} = \underline{\hspace{2cm}}$$

$$2 - \frac{3}{4} = \underline{\hspace{2cm}}$$

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

4. Show $\frac{5}{6} + \frac{4}{6}$ on a number line. Draw the jumps. What is the sum?

Sum: $\underline{\hspace{2cm}}$

5. Decompose $11/8$ into TWO different sums of fractions (same denominator).

$$11/8 = \underline{\quad} + \underline{\quad}$$

$$11/8 = \underline{\quad} + \underline{\quad} \text{ (different from above)}$$

$$11/8 \text{ as a mixed number: } \underline{\quad}$$

Part C • Tenths and Hundredths

6. Add. Write each sum as a single fraction.

$$3/10 + 25/100 = \underline{\quad}$$

$$7/10 + 4/100 = \underline{\quad}$$

$$6/10 + 50/100 = \underline{\quad}$$

7. Lin says, "To add $4/10$ and $35/100$, I rewrite $4/10$ as $40/100$. Then $40/100 + 35/100 = 75/100$." Explain WHY rewriting $4/10$ as $40/100$ is allowed.

Part D • Reasoning and Stories

8. Diego computes $3/5 + 2/5 = 5/10$. What did Diego do wrong? What is the correct sum?

Diego's mistake:

Correct answer: $\underline{\quad}$

9. Write a story problem for $3 \times 2/5$. Then solve it.

My problem:

Answer:

10. Pat has a ribbon $2\frac{1}{4}$ feet long. He cuts off a piece $\frac{3}{4}$ of a foot long. How much ribbon is left? Show your work two different ways.

Way 1. (number line):

Way 2. (decomposing the 2):

Answer: _____ feet

Part E • Thinking Deeply

11. Is $4 \times \frac{3}{8}$ the same as $\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$? Is it also the same as $\frac{12}{8}$? Explain how all three can be equal.

12. A line plot shows pencil lengths in inches: $\frac{3}{8}$ ($\times 2$), $\frac{4}{8}$ ($\times 3$), $\frac{6}{8}$ ($\times 1$), $\frac{7}{8}$ ($\times 2$). What is the TOTAL length of all the pencils end-to-end?

Show your work:

Total: _____ inches