Task 16: Adding Fractions with Unlike Denominators

Name: _____ **Date:** _____

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

Answer: _____

2. $\frac{3}{4} + \frac{1}{8} =$

Answer: _____

3. $\frac{2}{5} + \frac{1}{10} =$

Answer: _____

Name: _____ **Date:** _____

4. $\frac{1}{6} + \frac{3}{4} =$

Answer: _____

5. $\frac{2}{3} + \frac{1}{6} =$

Answer: _____

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

Answer: _____

TASK 17 · HOW TO SOLVE

CCSS 5.NF.A.1

Subtracting Fractions & Mixed Numbers

Example: $4\frac{1}{3} - 1\frac{3}{4} = ?$

STEP 1 — FIND A COMMON DENOMINATOR

Denominators 3 and 4 → LCD is **12**. Rewrite both fractions with 12 on the bottom.

$$4\frac{1}{3} = 4\frac{4}{12} \quad 1\frac{3}{4} = 1\frac{9}{12}$$

STEP 2 — CHECK THE FRACTION PART. CAN YOU SUBTRACT?

We need $\frac{4}{12} - \frac{9}{12}$. Since 4 is smaller than 9, we **borrow 1** from the whole number.

$$4\frac{4}{12} = 3 + 1 + \frac{4}{12} = 3 + \frac{12}{12} + \frac{4}{12} = 3\frac{16}{12}$$

STEP 3 — SUBTRACT WHOLE FROM WHOLE, FRACTION FROM FRACTION

Now the fraction part of the top number is big enough.

$$3\frac{16}{12} - 1\frac{9}{12} = 2\frac{7}{12}$$

STEP 4 — SIMPLIFY IF POSSIBLE

7 and 12 share no common factor other than 1.

$$\text{Answer: } 2\frac{7}{12}$$

Task 17: Subtracting Fractions & Mixed Numbers

Name: _____ **Date:** _____

1. $\frac{5}{6} - \frac{1}{3} =$

Answer: _____

2. $\frac{7}{8} - \frac{1}{2} =$

Answer: _____

3. $\frac{3}{4} - \frac{2}{5} =$

Answer: _____

Name: _____ **Date:** _____

4. $3\frac{1}{2} - 1\frac{1}{4} =$

Answer: _____

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

Answer: _____

6. $6\frac{1}{4} - 2\frac{5}{8} =$

Answer: _____

TASK 18 · HOW TO SOLVE

CCSS 5.NF.B.4 · 5.NF.B.6

Multiplying Fractions & Mixed Numbers

Example: $2\frac{1}{3} \times 1\frac{1}{2} = ?$

STEP 1 — TURN MIXED NUMBERS INTO IMPROPER FRACTIONS

Multiply the whole number by the denominator, then add the numerator. Keep the same denominator.

$$2\frac{1}{3} = \frac{(2\times3)+1}{3} = \frac{7}{3} \qquad 1\frac{1}{2} = \frac{(1\times2)+1}{2} = \frac{3}{2}$$

STEP 2 — MULTIPLY NUMERATORS; MULTIPLY DENOMINATORS

When multiplying fractions, go straight across. Do **not** find a common denominator.

$$\frac{7}{3} \times \frac{3}{2} = \frac{7\times3}{3\times2} = \frac{21}{6}$$

STEP 3 — SIMPLIFY AND CONVERT BACK

Divide to turn an improper fraction back into a mixed number.

$$\frac{21}{6} = \frac{7}{2} = 3\frac{1}{2}$$

CHECK

Estimate: 2 × 1.5 = 3. Our answer 3½ is close to 3. ✓

$$\text{Answer: } 3\frac{1}{2}$$

Task 18: Multiplying Fractions & Mixed Numbers

Name: _____ **Date:** _____

1. $\frac{1}{2} \times \frac{1}{3} =$

Answer: _____

2. $\frac{3}{4} \times \frac{2}{5} =$

Answer: _____

3. $\frac{2}{3} \times \frac{6}{7} =$

Answer: _____

Name: _____ **Date:** _____

4. $4 \times \frac{3}{8} =$

Answer: _____

5. $1\frac{1}{2} \times \frac{2}{3} =$

Answer: _____

6. $2\frac{1}{4} \times 1\frac{1}{3} =$

Answer: _____

TASK 19 · HOW TO SOLVE

CCSS 5.NF.B.7

Dividing Fractions & Whole Numbers

Example: $3 \div \frac{1}{4} = ?$

STEP 1 — THINK ABOUT WHAT THE QUESTION IS ASKING

"$3 \div \frac{1}{4}$" means: *how many $\frac{1}{4}$-sized pieces fit into 3 wholes?* Picture 3 pizzas cut into quarters.

STEP 2 — WRITE THE WHOLE NUMBER AS A FRACTION

Any whole number can be written over 1.

$$3 = \frac{3}{1}$$

STEP 3 — KEEP, CHANGE, FLIP

Keep the first fraction. **Change** ÷ to ×. **Flip** the second fraction (use its reciprocal).

$$\frac{3}{1} \div \frac{1}{4} = \frac{3}{1} \times \frac{4}{1}$$

STEP 4 — MULTIPLY STRAIGHT ACROSS

Now it's a multiplication problem. Multiply the tops, multiply the bottoms.

$$\frac{3}{1} \times \frac{4}{1} = \frac{12}{1} = \mathbf{12}$$

CHECK

Does 12 quarters equal 3 wholes? 4 quarters = 1 whole → 12 quarters = 3 wholes. ✓

Answer: 12

Task 19: Dividing Fractions & Whole Numbers

Name: _____ **Date:** _____

1. $4 \div \frac{1}{2} =$

Answer: _____

2. $6 \div \frac{1}{3} =$

Answer: _____

3. $\frac{1}{5} \div 4 =$

Answer: _____

Name: _____ **Date:** _____

4. $\frac{1}{3} \div 2 =$

Answer: _____

5. $5 \div \frac{1}{4} =$

Answer: _____

6. $10 \div \frac{1}{5} =$

Answer: _____

TASK 20 · HOW TO SOLVE

CCSS 5.NF.A.2 · 5.NF.B.6

Fraction Word Problems

Example: Maya ran $2\frac{3}{4}$ miles on Monday and $1\frac{1}{2}$ miles on Tuesday. How many miles did she run in all?

STEP 1 — DECIDE THE OPERATION

The question asks "how many *in all*". That signals **addition**.

$$2\frac{3}{4} + 1\frac{1}{2} = ?$$

STEP 2 — COMMON DENOMINATOR & ADD

LCD of 4 and 2 is **4**. Rewrite, then add the wholes and the fraction parts.

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

STEP 3 — SIMPLIFY (IMPROPER FRACTION INSIDE MIXED NUMBER)

$\frac{5}{4}$ is improper — it equals $1\frac{1}{4}$. Add that extra whole to the 3.

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

STEP 4 — ANSWER WITH THE CORRECT UNIT

Word problems always need a **label**. In this case: **miles**.

$$\text{Answer: } 4\frac{1}{4} \text{ miles}$$

Task 20: Fraction Word Problems

Name: _____ **Date:** _____

1. A recipe calls for $\frac{3}{4}$ cup of flour. Jamal is making $2\frac{1}{2}$ batches. How many cups of flour does he need?

Answer: _____

2. Sofia had $5\frac{1}{2}$ yards of ribbon. She used $2\frac{3}{4}$ yards for a gift. How much ribbon is left?

Answer: _____

Name: _____ **Date:** _____

3. A board is 6 feet long. Mr. Clark cuts it into pieces that are each $\frac{2}{3}$ foot long. How many pieces does he get?

Answer: _____

4. Ava walked $1\frac{1}{4}$ miles, then $2\frac{2}{3}$ miles, then $\frac{5}{6}$ mile. How far did she walk total?

Answer: _____

Name: _____ **Date:** _____

5. A bag of rice weighs $\frac{7}{8}$ pound. How much do 4 bags weigh?

Answer: _____

6. One-third of a pizza is left. If 2 friends share it equally, what fraction of the whole pizza does each friend get?

Answer: _____