

# ★ STUDY GUIDE: Fractions, Decimals & Money Review

## 1 Adding & Subtracting Fractions with Unlike Denominators

### Key Steps

1. Find the least common denominator (LCD).
2. Rewrite each fraction using the new denominator.
3. Add or subtract the numerators.
4. Simplify if needed.

### Practice Problems from Test

- Word problem:
  - A =  $\frac{1}{4}$  received A's
  - B =  $\frac{1}{3}$  received B's
  - Find  $\frac{1}{4} + \frac{1}{3}$
- Add:  $\frac{7}{12} + \frac{1}{3}$
- Add:  $\frac{5}{12} + \frac{3}{4}$
- Subtract:  $\frac{3}{4} - \frac{5}{8}$
- Subtract:  $\frac{1}{4} - \frac{1}{12}$
- Word problem: Comparing heights
  - Find  $\frac{1}{3} - \frac{1}{4}$

### Tips

- Common denominators for 3 & 4 → 12

- Always simplify your answers!

## **2** Multiply Fractions by Whole Numbers

### **How To**

Whole number  $\times$  fraction

→ Multiply whole number  $\times$  numerator

→ Keep the denominator the same

→ Simplify

### **Practice Problems**

- $12 \times 1/6$
- $2 \times 2/5$
- $8 \times 3/4$

### **Tips**

- Turn the whole number into a fraction:  
Example:  $12 = 12/1$
- Reduce at the end.

## **3** Multiply Mixed Numbers by Whole Numbers

### **Steps**

1. Convert the mixed number to an improper fraction.
2. Multiply the whole number  $\times$  improper fraction.
3. Convert the answer back to a mixed number (if needed).

### **Practice Problems**

- $5 \times 6 \frac{3}{8}$
- $6 \times 2 \frac{11}{12}$

- $9 \times 8 \frac{1}{8}$

## Tips

- To convert:  
whole  $\times$  denominator + numerator
- Example:  
 $6 \frac{3}{8} \rightarrow (6 \times 8) + 3 = 48 + 3 = 51/8$

## 4 Decimal Place Value

### Important Places

- Ones
- Tenths
- Hundredths
- Thousandths

Example:

**18.96**

1  $\rightarrow$  tens place

8  $\rightarrow$  ones

9  $\rightarrow$  tenths

6  $\rightarrow$  hundredths

### Practice

- Identify where the **1** is in *18.96*.

## 5 Convert Decimals to Fractions

### Steps

1. Look at the place value.
2. Write the decimal as a fraction.
3. Simplify.

Example:

$0.97 \rightarrow 97/100$

## Practice

- Convert 0.97 to a fraction.

## 6 Add & Subtract Decimals

### Most Important Rule

👉 **Line up the decimal points.**

Then add or subtract normally.

### Practice Problems

- $55.17 - 24.88$
- $819.5 + 266.6$
- $731.98 - 258.02$

### Tips

- Add zeros if needed to keep place values even.

## 7 Decimal Word Problems

### Steps

1. Identify the operation (add/subtract).
2. Line up decimals.
3. Solve.

### Practice Problems

- $25.5 \text{ lbs} - 3 \text{ lbs spilled}$
- Stacy earns \$15, buys cards for \$5.35

- Jackie pays  $\$35.75 + \$10.40$

## Tips

- Money works the same as decimals.

# ✨ QUICK REFERENCE CHART

Skill	What to Do
Add fractions	Find LCD → rewrite → add → simplify
Subtract fractions	LCD → rewrite → subtract → simplify
Multiply fraction by whole number	Whole $\times$ numerator $\div$ denominator
Multiply mixed numbers	Convert → multiply → simplify
Decimal place value	Tenths = one digit after decimal
Decimal → fraction	Read place value ( $0.97 = 97/100$ )
Add/subtract decimals	Line up decimals!