



Fractions and Decimals Mastery Assessment

**Student Name:** \_\_\_\_\_ **Class:** \_\_\_\_\_  
**Student ID:** \_\_\_\_\_ **Date:** {{DATE}}

Assessment Details

**Duration:** 90 minutes **Total Marks:** 100

**Topics Covered:**

- Fraction to Decimal Conversions
- Comparative Analysis
- Real-World Applications
- Problem-Solving Strategies

Assessment Guidelines:

1. Read each question carefully
2. Show all working steps
3. Use calculator when permitted
4. Demonstrate clear mathematical reasoning
5. Reflect on your problem-solving approach

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Section A: Conversion Challenge [20 marks]  
Question 1 [4 marks]

Convert the following fractions to decimals (round to 3 decimal places):

- A)  $\frac{3}{8}$  = \_\_\_\_\_
- B)  $\frac{7}{11}$  = \_\_\_\_\_
- C)  $2\frac{1}{3}$  = \_\_\_\_\_
- D)  $\frac{5}{6}$  = \_\_\_\_\_

Question 2 [4 marks]

Identify which decimal representation is correct:

- A)  $\frac{3}{4}$  = 0.25
- B)  $\frac{3}{4}$  = 0.75
- C)  $\frac{3}{4}$  = 0.50
- D)  $\frac{3}{4}$  = 1.25

Section B: Comparative Analysis [30 marks]  
Question 3 [10 marks]

Order the following mixed numbers and decimals from smallest to largest:

2.75,  $3\frac{1}{4}$ , 2.8,  $\frac{11}{4}$ , 2.65

Question 4 [10 marks]

A recipe requires  $2\frac{3}{4}$  cups of flour. If you want to double the recipe, how many cups will you need?

A construction project requires precise measurements. Complete the following tasks:

- a) Convert 3.5 meters to centimeters [5 marks]
- b) If a wall is  $2\frac{1}{4}$  meters long, how many 0.5-meter tiles are needed to cover it? [10 marks]
- c) Calculate the remaining space after tiling [5 marks]

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Reflection and Learning Insights

**Mathematical Reflection**

Take time to reflect on your problem-solving journey:

- 1. What strategy helped you most in solving fraction and decimal problems?
- 2. Describe a challenge you encountered and how you overcame it.
- 3. How might these mathematical skills apply in real-world scenarios?