Introduction to Fractions and Decimals Assessment

Student Name: _____	**Class:** _____
Student ID: _____	**Date:** {{DATE}}

Assessment Details

Duration: 45 minutes	**Total Marks:** 40
Topics Covered:	• Fractions and Decimals Operations • Applications of Fractions and Decimals

Instructions to Students:

1. Read all questions carefully before attempting.
2. Show all working out - marks are awarded for method.
3. Calculator use is permitted except where stated otherwise.
4. Write your answers in the spaces provided.
5. If you need more space, use the additional pages at the end.
6. Time management is crucial - allocate approximately 1 minute per mark.

Section A: Multiple Choice [10 marks]

Question 1 **[1 mark]**

What is the decimal equivalent of the fraction 3/4?

A) 0.25

B) 0.5

C) 0.75

D) 1.0

Question 2 **[1 mark]**

Which of the following fractions is equivalent to 2/3?

A) 4/6

B) 6/8

C) 8/12

D) 12/16

Question 3 **[1 mark]**

What is the result of adding 1/2 and 1/4?

A) 1/4

B) 1/2

C) 3/4

D) 1

Question 4 **[1 mark]**

What is the result of subtracting 1/4 from 3/4?

A) 1/2

B) 1/4

C) 3/4

D) 1

Question 5 **[1 mark]**

What is the result of multiplying 1/2 and 3/4?

A) 1/4

B) 1/2

C) 3/4

D) 1

Question 6 **[1 mark]**

What is the result of dividing 3/4 by 1/2?

A) 1/2

B) 1

C) 3/2

D) 2

Question 7 **[1 mark]**

What is the decimal equivalent of the fraction 2/5?

A) 0.2

B) 0.4

C) 0.6

D) 0.8

Question 8 **[1 mark]**

What is the fraction equivalent of the decimal 0.8?

A) 1/2

B) 2/3

C) 3/4

D) 4/5

Question 9 **[1 mark]**

What is the result of adding 2/3 and 1/4?

A) 3/4

B) 1

C) 5/6

D) 7/8

Question 10 **[1 mark]**

What is the result of subtracting 1/3 from 2/3?

A) 1/3

B) 1/2

C) 2/3

D) 1

Section B: Short Answer Questions [15 marks]

Question 11 **[2 marks]**

A recipe calls for 3/4 cup of sugar. If you want to make half the recipe, how much sugar will you need?

Question 12 **[2 marks]**

A shirt is on sale for 25% off its original price of $25. How much will you pay for the shirt?

Question 13 **[2 marks]**

A bookshelf has 5 shelves, and each shelf can hold 3/4 of a meter of books. If the bookshelf is currently empty, how many meters of books can be placed on it in total?

Question 14 **[2 marks]**

A water tank can hold 3/4 of a liter of water. If 1/4 liter of water is already in the tank, how much more water can be added?

Question 15 **[2 marks]**

A bakery sells 2/3 of a cake for $12. How much will they sell the whole cake for?

Section C: Performance Task [5 marks]

Question 16 **[5 marks]**

Tom has 1 1/2 cups of flour and needs 2 3/4 cups to make a cake. How much more flour does Tom need to buy? Show your work and explain your answer.

Section D: Project-Based Question [10 marks]

Question 17 **[10 marks]**

Create a graph to show the cost of a monthly phone plan that charges $25 per month plus 0.05 per text message. If you send 100 text messages per month, how much will your total bill be? Label your graph and explain your answer.

Marking Guide

Section A: Multiple Choice Questions (1 point each)

Section B: Short Answer Questions (2 points each)

Section C: Performance Task (5 points)

Section D: Project-Based Question (10 points)

Implementation Guidelines

Time allocation: 45 minutes

Administration tips:

- Ensure students have access to calculators and pencils
- Provide clear instructions and examples for each section
- Allow students to ask questions and seek clarification as needed

Differentiation Options

For students with learning difficulties:

- Provide extra time to complete the assessment
- Offer one-on-one support during the assessment
- Modify the questions to make them more accessible

For English language learners:

- Provide a bilingual dictionary or glossary
- Offer extra time to complete the assessment
- Modify the questions to make them more accessible

For gifted students:

- Provide additional challenging questions or tasks
- Encourage students to create their own real-world problems and solutions
- Offer opportunities for students to present their work to the class

Conclusion

This assessment is designed to evaluate students' understanding of fractions and decimals operations and applications. It consists of multiple-choice questions, short-answer questions, a performance task, and a project-based question. The assessment is aligned with the learning objectives of the mathematics curriculum and is suitable for students aged 10-12 years old.