PLANIT TEACHERS

Fractions and Decimals Assessment

Student Name: _____   Class: _____

Student ID: _____   Date: _____

Assessment Details

Duration: 45 minutes	**Total Marks:** 100
Topics Covered:	• Equivalent Fractions • Simplifying Fractions • Converting between Fractions and Decimals • Applying Fractions and Decimals to Real-World Problems

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.

Question 1 [2 marks]

What is the definition of equivalent fractions?

A) Fractions with the same numerator and denominator

B) Fractions with the same value but different numerators and denominators

C) Fractions with different values and different numerators and denominators

D) Fractions with the same numerator but different denominators

Question 2 [2 marks]

How do you simplify a fraction?

A) By adding the numerator and denominator

B) By subtracting the numerator and denominator

C) By dividing the numerator and denominator by their greatest common divisor

D) By multiplying the numerator and denominator by their greatest common divisor

Question 3 [2 marks]

What is the relationship between fractions and decimals?

A) Fractions are always greater than decimals

B) Decimals are always greater than fractions

C) Fractions can be converted to decimals and vice versa

D) Fractions and decimals are unrelated

Question 4 [2 marks]

What is the rule for adding fractions with unlike denominators?

A) Add the numerators and keep the same denominator

B) Add the denominators and keep the same numerator

C) Find the least common multiple of the denominators and add the numerators

D) Subtract the numerators and keep the same denominator

Question 5 [2 marks]

What is the rule for multiplying fractions?

A) Multiply the numerators and denominators separately

B) Multiply the numerators and add the denominators

C) Multiply the denominators and add the numerators

D) Multiply the numerators and denominators and then simplify

Question 6 [5 marks]

Write a short paragraph explaining the concept of equivalent fractions.

Question 7 [5 marks]

Provide an example of a real-world problem that involves converting between fractions and decimals.

Question 8 [10 marks]

Simplify the fraction 12/16.

Question 9 [10 marks]

Convert the decimal 0.5 to a fraction.

Question 10 [15 marks]

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

a) Calculate the amount of sugar needed [5 marks]

b) Explain your reasoning and provide any necessary calculations [5 marks]

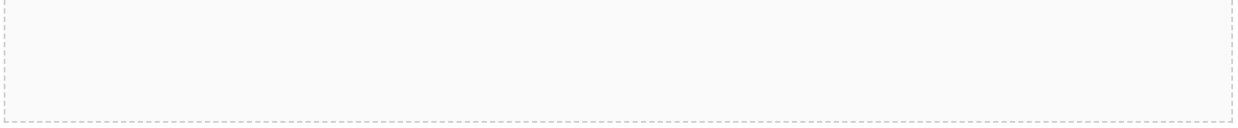c) Provide a diagram or visual representation to support your answer [5 marks]

Question 11 [10 marks]

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

a) Calculate the amount of water that can be added [5 marks]

b) Explain your reasoning and provide any necessary calculations [5 marks]

Question 12 [10 marks]

A bakery sells 1/2 dozen donuts for $6. How much will 3/4 dozen donuts cost?

a) Calculate the cost of 3/4 dozen donuts [5 marks]

b) Explain your reasoning and provide any necessary calculations [5 marks]

Question 13 [10 marks]

A car travels 3/4 of the distance between two cities in 2 hours. If the total distance is 240 miles, how many miles does the car travel per hour?

a) Calculate the distance traveled per hour [5 marks]

b) Explain your reasoning and provide any necessary calculations [5 marks]

Additional Space for Answers