OALCF Task Cover Sheet

Task Title: Pre-Admission Testing Sample Questions – Fractions, Decimals and Percents

Learner Name:	
Date Started:	**Date Completed:**
Successful Completion: Yes___ No___	
Goal Path: Employment___Apprenticeship ✓ Secondary School ✓ Post Secondary ✓ Independence_____	
Task Description: The learner will answer questions on fractions, decimals and percents from a college mathematics pre-admission sample test used to prepare students for a post-secondary mature applicant test.	
Competency: A: Read and Use Information B: Communicate Ideas and Information C: Understand and Use Numbers	**Task Group(s):** A1: Read continuous text B3: Complete and create documents C1: Manage Money C3: Use Measures C4: Manage Data

Level Indicators:

A1.1: Read brief texts to locate specific details
B3.1a: Make straightforward entries to complete very simple documents
C1.2: Make low-level inferences to calculate costs and expenses that may include rates such as taxes and discounts
C3.2: Use measures to make one-step calculations
C4.2: Make low-level inferences to organize, make summary calculations and represent data

Performance Descriptors: see chart on last page

Materials Required:

- task sets and documents
- scientific calculator
- pencil/pen
- paper

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Learner Information and Tasks:

The Secondary School Credits, Post Secondary and Apprenticeship paths require learners to complete math question sheets for class and on tests and exams. The following tasks are based on three areas of mathematics:

- Fractions
- Decimals
- Percents

Answer the tasks on a separate sheet of paper showing your calculations.

Practitioner submitted task: Prepared for the Project, Teaching to Fish (Build Tasks) Integrating OALCF Task Development within Ontario's Literacy Programs *(2014)*

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PRE-ADMISSION TESTING SAMPLE QUESTIONS - COMPREHENSIVE TECHNICAL MATH

Topic 1: Fractions

1) Reduce $\frac{9}{36}$
2) Convert this fraction into a mixed number in lowest terms $\frac{60}{25}$
3) Find the Least Common Denominator of $\frac{1}{3}, \frac{1}{15}, \frac{1}{9}$
4) Two pins measure $\frac{3}{6}$ and $\frac{4}{9}$
   a) What is the length of the larger pin?
   b) What is the length difference between the two pins?
5) Add the fractions and bring your answer to lowest terms $\frac{1}{5}+\frac{1}{10}+\frac{1}{6}$
6) Add $2\frac{1}{2}+\frac{1}{4}+\frac{1}{5}$
7) Add $4\frac{1}{3}-1\frac{1}{7}$
8) Multiply $4\frac{2}{9}\times 1\frac{1}{6}$
9) Divide $3\frac{1}{2}\div 1\frac{2}{3}$
10) Simplify $\frac{9\frac{3}{4}+\frac{1}{5}}{\frac{5}{8}}$
11) Find the value of x given $\frac{x}{23}=\frac{15}{3}$

Topic 2: Decimals

1) Divide 1.3289 by 0.431 and round to three decimal places
2) Convert $158\frac{3}{5}$ to a decimal. Round to one decimal place.
3) Convert 11.78 to a mixed fraction
4) Evaluate 2,300 + 3.13 + 1.09. Round to one decimal place.
5) Evaluate 1.35 – 26.491 + 11.7. Round to three decimal places.
6) Evaluate 0.6 x 12.34 x 1.4. Round to two decimal places.
7) Divide 1.113 by 0.56. Round to three decimal places
8) Determine the volume of an aquarium with these definitions:
   Length = 78 cm; Width = 6 cm; Height = 43 cm
9) Bob makes $888.87 per week before deductions. The following deductions are made from his paycheque: Income Tax $124.00; Company Pension $42.86; C.P.P. $38.97; and Dental Plan = $31.97.
   What are his total Deductions? What is his take-home pay?
10) Determine how much change you would get from $100 if you purchased 31.9 litres of gas at a cost of 96.7 cents per litre.

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Topic 3: Percents

1) Express the following as percents:

Decimal	Percent
a) 0.62	
b) 3.312	
c) 13	

2) Express the following percents as decimals:

Percent	Decimal
a) 79 %	
b) 317.2 %	
c) $14\frac{1}{3}$ %	

3) Express the following fractions as percents:

Fraction	Percent
a) $\frac{887}{962}$	
b) $\frac{14}{100}$	
c) $7\frac{7}{14}$	

4) Express the following percents in fractional form in lowest terms:

Percent %	Fraction Form
a) 86 %	
b) 52 %	
c) $7\frac{1}{2}$ %	

5) Determine $89\frac{1}{2}$ % of $ 3,633 rounded to the nearest cent.

6) 316 kg is 15% of what measurement?

7) Helmer Co. Produces 1,090 DVD's per year. If 1.4% of these are defective, how many defective DVD's are produced per year? Round your answer to the nearest whole number.

8) Mohawk Digital Centre sells webcams for $120 each. In an attempt to increase profit they increased the price by $5.81. Express this increase as a percent of the original price.

9) Mohawk Digital Centre sells digital cameras for $390.45 each. In an attempt to increase sales they reduced the price by 2%. What is the new price after the reduction?

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Answer Key

Topic 1: Fractions

1) $\frac{1}{4}$
2) $2\frac{2}{5}$
3) 45
4) $\frac{1}{2}, \frac{1}{18}$
5) $\frac{7}{15}$
6) $2\frac{19}{20}$
7) $3\frac{4}{21}$
8) $4\frac{25}{27}$
9) $2\frac{1}{10}$
10) $15\frac{23}{25}$
11) 115

Topic 2: Decimals

1) 3.083
2) 158.6
3) $11\frac{39}{50}$
4) 2,304.2
5) - 13.441
6) 10.37
7) 1.988
8) 20, 124 cm^3
9) $237.80 ; $651.07
10) $69.15

Topic 3: Percents

1 a. 62 %
1 b. 331.2 %
1 c. 1,300 %
2 a. 0.79
2 b. 3.172
2 c. 0.143
3 a. 92.2%
3 b. 14%
3 c. 750%
4 a. $\frac{43}{50}$
4 b. $\frac{13}{25}$
4 c. $\frac{3}{40}$
5) $3251.54
6) 2,106.67 kg
7) 15
8) 4.84%
9) $382.64

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	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
A1.1	• reads short text to locate a single piece of information			
	• follows simple, straightforward instructional texts			
B3.1a	• makes a direct match between what is requested and what is entered			
C1.2	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	• calculates percentages			
	• interprets and applies rates (e.g. $/kg, $/1)			
	• chooses and performs required operation(s); may make inferences to identify required operation(s)			
	• selects appropriate steps to reach solutions			
	• represents costs and rates using monetary symbols, decimals and percentages			
	• interprets, represents and converts amounts using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. ½, ¼)			
C1.2	• uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			
C3.2	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	• interprets and represents area and volume using symbols and abbreviations (e.g. m3)			
	• interprets and applies rates (e.g. km/hr) and ratios (e.g. map scales)			
	• understands and uses formulas for finding the perimeter, area and volume of simple, common shapes			

	• chooses and performs required operation(s); may make inferences to identify required operation(s)			
	• selects appropriate steps to solutions			
	• interprets, represents and converts measures using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. ½, ¼)			
C4.2	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			

This task: was successfully completed___ needs to be tried again___

Learner Comments

Instructor (print) **Learner Signature**