



CAMOSUN COLLEGE
School of Access
Academic and Career Foundations Department

MATH 039 Basic Math for Health Care

VIDEO LINKS

MATH 039 course content Text: <i>Math Basics for the Healthcare Professional</i>		Video Links
MODULE 1	ARITHMETIC OPERATIONS (no calculator)	
Page	Unit 1 – Whole Number Review	
6	Addition	Why carrying works in addition Carrying to add 3-digit numbers Addition with carrying practice Decimals on a number line Decimal Place value Rounding decimals (1) Rounding decimals (2) Comparing decimals Adding decimals
8	Subtraction	Borrowing/regrouping to subtract (1) Borrowing to subtract (2) Borrowing to subtract (3) Borrowing to subtract (4) Borrowing to subtract (5)
9	Multiplication	Multiplication explained (1) Multiplication explained (2) Times tables chart patterns Multiplication facts x 1, 2, 3, 4, 5, 6, 7, 8, 9 Multiplication facts x 10, 11, 12 How to multiply Ways to show multiplication Multiplying with multiples of 10 Multiplying 2-digit numbers (1) Multiplying 2-digit numbers (2) Multiplying larger numbers Multiplication practice questions Multiplication estimation Multiplying decimals: how to Multiplying decimals example Multiplying decimals by power of 10 Multiply decimals example question
11	Prime Factorization	Prime factorization
12	Division: <i>Practice</i>	Division explained (1) Division explained (2) Long division Dividing numbers: intro to remainders 2-digit divisors Dividing to get a decimal answer example 1 Dividing to get a decimal answer example 2 Dividing multi digit decimal Dividing a decimal with hundredths example

	MATH 039 Course Content	Video Links
15	Solving for the Unknown Number	Using algebra to solve for an unknown number (1) Using algebra to solve for an unknown number (2)
16	Rounding	Rounding whole numbers (1) Rounding whole numbers (2) Rounding whole numbers (3)
17	Estimation	Estimating a multiplication question Estimating a decimal Rounding decimals on number line Practice rounding decimals on the number line
18	Statistical Analysis	Mean, median, mode
25	Roman Numerals	Intro to roman numerals More on roman numerals
26	Time in Allied Health	Universal Military Time
31	Unit 2 Fractions	
33	Part-to-whole Relationships	Fractions explained More on understanding fractions Numerator & denominator explained Converting mixed numbers into improper fractions
34	Equivalent fractions	Equivalent fractions (1) Equivalent fractions (2) Equivalent fractions (3)
35	Reducing to Lowest or Simplest Terms	Fractions in lowest terms Comparing fractions (1) Comparing fractions (2)
38	Improper Fractions	Converting mixed numbers to improper fractions Converting from decimal to fraction notation Converting improper fractions into mixed numbers Comparing improper fractions and mixed numbers Improper fractions and mixed numbers on number line
39	Adding Fractions with Like Denominators	Adding fractions with like denominators
41	Finding the Common Denominator	Finding common denominators
43	Difficult Common Denominators	Adding fractions with unlike denominators Adding mixed numbers Adding mixed numbers with unlike denominators (1) Adding mixed numbers with unlike denominators (2) Adding fractions word problems
46	Ordering Fractions	Ordering fractions

	MATH 039 Course Content	Video Links
46	Subtraction of Fractions	Subtracting fractions with like denominators Subtracting fractions with unlike denominators Subtracting mixed numbers (1) Subtracting mixed numbers (2) Subtracting mixed numbers with unlike denominators Subtracting mixed numbers word problems (1) Subtracting mixed numbers word problems (2)
51	Multiplication of Fractions	Multiplying fractions (1) Multiplying fractions (2) How to use calculator for fraction questions Multiplying fractions & whole numbers Multiplying fractions word problem (1) Multiplying fractions word problems (2) Multiplying fractions word problem (3) Multiplying fractions word problems (4)
55	Multiplication of Mixed Numbers	Multiplying mixed numbers Multiplying fractions & mixed numbers
58	Division of Fractions	Division that results in a fraction Dividing fractions Fraction Division: multiply by reciprocal Finding the reciprocal of a number Dividing mixed numbers Dividing fractions word problem (1) Dividing fractions word problems (2) Dividing fractions word problems (3) Dividing fractions word problem (4) Dividing fractions word problems (5)
61	Converting Temperatures Using Fraction Formulas	Comparing farenheit and celcius temperature scales Using formula to convert Celcius temperature to Farenheit
63	Complex Fractions	Complex fractions
66	Measurement in Fractions	Converting feet and inch units within Imperial system American units distance American units weight/mass American units volume/capacity American units volume/capacity (2)
73	Unit 3 – Decimals	
75	Decimals	Word name for decimal number Decimals on a number line Decimal Place value
78	Rounding Decimals	Rounding decimals (1) Rounding decimals (2) Comparing decimals
79	Comparing Decimals	Estimating with decimals
82	Addition of Decimals	Adding decimals
83	Subtraction of Decimals	Adding and subtracting decimals
84	Multiplication of Decimals	Multiplying decimals: how to Multiply decimals example question
87	Division of Decimals	Dividing decimals (1) Dividing decimals (2)
89	Simplified Multiplication and Division of Decimals	Multiplying decimals by power of 10 Multiplying decimals by 10 Dividing decimals by 10 Multiply and divide decimals by 10 Multiply and divide decimals by 10, 100, 1000

	MATH 039 Course Content	Video Links
92	Changing Decimals to Fractions	Converting decimals to fractions (1) Converting decimals to fractions (2) Converting decimals to fractions (3) Converting decimals to fractions (4) Converting decimals to fractions (5) Converting decimals to fractions (6)
94	Changing Fractions to Decimals	Converting from fractions to decimals Converting fractions to decimals (1) Converting fraction to a decimal (2) Converting a fraction to a repeating decimal
96	Temperature Conversions with Decimals	Quick tips to convert celcius to farenheit
97	Solving Mixed Fraction and Decimal Problems	
TEST	Module 1 Test - Arithmetic Operations (Units 1-3) (no calculator)	
	(75% minimum)	
MODULE 2	RATIO, PERCENT & MEASUREMENT (calculator allowed)	
103	Unit 4 – Ratio & Proportion	
105	Ratio	How to write a ratio Writing a ratio example Practice writing ratios Equivalent ratios More equivalent ratios practice Equivalent ratio word problem 1 Equivalent ratio word problem 2 Unit rate Unit prices
109	Proportion	Intro to cross multiplication How to cross multiply to solve for an unknown How to solve a proportion using cross-multiplication Practice cross-multiplication Three different ways to solve equivalent fractions Proportion word problem: how many hot dogs Finding an unknown in a proportion Solving proportions using cross-multiplying Using proportions to solve question using Mapscale
110	Solving for “x”	Solving proportions using cross-multiplying Metric Imperial Conversions Using Proportion Method Converting metric to imperial (10 cm to inches) Converting American gallons to cups Convert inches to yards Practice converting pounds to ounces Converting feet and inch units within Imperial system American units distance American units weight/mass American units volume/capacity American units volume/capacity (2)
115	Word Problems Using Proportions	Using proportions to solve word problems Using cross multiply to solve conversions feet to inches etc

117	Solving for “x” in More Complex Problems	Using proportions to solve word problems Using proportions to solve questions with fractions Solving proportions with fractions example
119	Nutritional Application of Proportions	Calculate number of grams
120	Practice with Food Labels	Intro to reading food labels
127	<i>Unit 5 – Percent</i>	
129	Percent-to-Decimal Conversion	Percent as decimal Converting percent to decimal practice Convert percent to decimal
130	Decimal-to-Percent Conversion	Convert decimal to percent
131	Using Proportion to Solve Percent Problems	Using proportion method to solve percents (1) Using proportion method to solve percents (2) Percent of a total Finding percent of total

	MATH 039 Course Content	Video Links
136	Percent Change	Calculating a percent increase using the equation method Calculating percent decrease or increase using proportion method
137	Percent Strength of Solutions	Intro to percent strength of solution Changing a percent to a fraction in lowest terms
141	Single Trade Discount	Intro to calculating net price after discount Calculating a percent off using equation method Calculating amount of discount and final price
146	Unit 6 – Combined Applications	
148	Conversions Among Fractions, Decimals, Ratios & Percent	Practice converting percent to decimal Converting fraction into decimal, then percent
152	Using Combined Applications in Measurement Conversion	American units volume/capacity(1) American units volume/capacity (2)
153	Standard Units of Measure	Convert pounds to kilos using cross multiply American units distance Convert inches to yards Converting feet and inch units within Imperial system American units weight/mass Practice converting pounds to ounces American units volume/capacity(1) American units volume/capacity (2) Converting American gallons to cups
185	Unit 8 – The Metric System	
188	Using the Metric Symbols	How much is a gram or a kilogram practice questions Intro to metric system Move decimal right or left for metric conversions Converting between metric units Converting metric to metric Converting kilograms to grams Comparing metric units of length Metric length measurements Converting metric to metric Convert metric lengths cm to m Measuring mass and when to use g, milligram, kilogram
190	Changing Unit Measures	Metric Conversions Using Chart Kilos to micrograms More conversions practice kilos to mcg Converting metric units of length Converting kilograms to grams
TEST	Module 2 Test – Ratio, Percent & Measurement (Units 4, 5, 6 & 8) (75% minimum)	
MODULE 3	DRUG LABELS, CONVERSIONS AND DOSAGE	
201	Unit 9 - Reading Drug Labels, Medicine Cups, Syringes & IV Bags	
204	Drug Labels	How to read drug labels Reading drug labels
209	Medicine Cups	Reading measuring containers
210	Syringes	How to read a syringe
211	IV Bags	How to read an IV bag

	MATH 039 Course Content	Video Links
218	<i>Unit 10 - Apothecary Measurement & Conversion</i>	
219	Apothecary Measurement & Conversions	Practice converting apothecary measurements Grain to gram calculations
229	Rounding in Dosage Calculations	Intro to rounding dosage calculations
235	<i>Unit 11 - Dosage Calculations</i>	
237	Performing Dosage Calculations	
TEST	<i>Module 3 Test – Drug Labels, Conversions & Dosage (Units 9-11)</i>	
	(75% minimum)	
MODULE 4	<i>TYPES OF DOSAGE CALCULATIONS</i>	
253	<i>Unit 12 - Parenteral Dosage</i>	Intro to dosage calculations
255	Injections	IM Injection Calculations
267	<i>Unit 13 – Basics of Intravenous Fluid Administration</i>	
270	Calculating IV Infusion Rates	Calculate infusion rate
273	Modified Setup	
275	Infusion Duration	How to calculate infusion duration
277	Calculating Total Volume	Infusion volume calculation
	<i>Unit 14 – Basic Dosage by Body Weight</i>	
284	Conversion to Kilograms	Understanding pounds to kg conversions
286	Calculating Dosage	Calculate dosage using proportion method
TEST	<i>Module 4 – Types of Dosage Calculations (Units 12-14)</i>	
	(75% minimum)	
Review	Math 039 Review: <i>Comprehensive Post-test (Appendix A on P. 293)</i>	
FINAL	Final Exam	