Math For Health Sciences Challenge Exam

Who is this exam for:	Students wanting to satisfy a Math for Health Sciences *prerequisite* at RTC. Passing this exam does *not* award credits for taking a Math for Health Sciences course – it only indicates knowledge of course material and a fulfillment of a prerequisite.
Math Prerequisite:	Minimum of Pre-Algebra with a 2.0 or better within the last year or a minimum score of 60 on the Pre-Algebra COMPASS exam. COMPASS exam must have been taken within one year prior to taking the Math for Health Sciences Challenge Exam.
Frequency of taking exam:	A student can take the challenge exam once per quarter (Fall, Winter, Spring, Summer).
Cost of the exam:	$40 proctoring fee is payable to the RTC cashiers office. This fee is paid each time the exam is taken. This fee must be paid prior to taking the exam.
What to bring to exam:	Receipt for proctoring fee. Photo ID. Pencil and eraser
Scheduling for exam:	Exam is offered through the RTC Testing Center. Please see the Testing Center's schedule for available dates and times.

Exam Structure:

- 50 questions
- 2 hour time limit
- NO calculators, NO notes
- Each question is graded as correct or incorrect (no partial credit).
- Correct numerical format (decimal, fraction, mixed number, integer) and appropriate physical units are also considered for correctness of answers.
- At least 80% of the answers must be correct to pass the exam.

Exam Content

- Addition/Subtraction/Multiplication/Division of fractions, decimals, mixed numbers, integers
- Absolute Values, exponential notation, square roots of numbers, rounding
- Ratios and Proportions: Simplifying ratios and solving proportions
- Percentages
- 24 hour clock
- Roman Numerals
- Household units / Metric units / Apothecary units of measurement.
- Conversions within, and between, the different systems of measurement. The following approximate equivalences need to be used for the exam:

fluid dram 1 ≈ 1 teaspoon	grain *i* ≈ 60 milligrams	1 teaspoon ≈ 5 milliliters
fluid ounce 1 ≈ fluid dram 8	fluid ounce 1 ≈ 30 milliliters	1 quart ≈ 1 liter
1 cup ≈ 250 milliliters	1 inch ≈ 2.54 centimeters	1 kilogram ≈ 2.2 pounds
1 teaspoon ≈ 60 drops		

- Temperature conversions between Fahrenheit and Celsius
- Dosage calculations
- Dosage by weight calculations
- Percent solution calculations
- Parenteral calculations
- IV calculations

Study References:

- *Math Basics for the Health Care Professional, 3rd edition*, M. Lesmeister
- *Math for Meds: Dosages and Solutions, 10th edition,* A Curren
- http://msumedcalc.com/
- http://accd.edu/sac/nursing/math/default.html