

## **Study Guide for the HESI Math Exam**

The HESI Nurses Entry Exam is required to enroll in the Practical Nursing and Surgical Tech programs at TCAT Upper Cumberland. I developed this study guide to help potential students study for the exam.

\*\* This is not a guide developed by TCAT or El Sevier. \*\*

***TCAT Upper Cumberland requires potential students to take the Math and Reading Comprehension sections only.***

**The passing score for Reading is 70 and the passing score for Math is 70.**

### **Free HESI tutoring is available through:**

- The Cumberland Adult Literacy Council. Contact: Steve Zavacky (931) 337-5809, [stevez@cumberlandliteracy.org](mailto:stevez@cumberlandliteracy.org).
- Adult Education program (often linked with the Center for Lifelong Learning or Cumberland Adult Reading Council in Crossville). Contact: Julia Goss, 931-459-6608, [julia.goss@pcstn.com](mailto:julia.goss@pcstn.com) .

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Nurses must be able to accurately solve calculations related to conversions, dosages, liquid concentrations, reconstituted medications, weight-based medications, intravenous infusions and evaluate final answers to ensure safe medication administration. Below are various areas of math covered by the HESI entry exam:

- **Roman Numerals.**
- **Military time.**
- **Metric system.**
- **Solve equations.** To solve equations, you need to work out the value of the unknown variable by adding, subtracting, multiplying or dividing both sides of the equation by the same value. Combine like terms. Simplify the equation by using the opposite operation on both sides. Isolate the variable on one side of the equation.
  - Accurately perform calculations using decimals, fractions, percentages, ratios, and/or proportions.
  - Add, subtract, multiply and divide whole numbers.
  - Add, subtract, multiply and divide fractions.
  - Add, subtract, multiply and divide decimals.
  - Convert decimal to fraction.
  - Convert decimal to ratio.
  - Convert decimal to percent.
  - Convert percent to decimal.
  - Convert fraction to decimal.
  - Rounding off decimals.
  - Improper and mixed fractions.
  - Solve word problems with fractions and decimals.
  - Probability expressed as a percentage.
- **Ratios and Proportions.**
  - Ratio multiplication and subtraction.
  - Set up and solve ratio and proportion problems.
- **Convert between the metric and household systems.**
  - Convert from one system of measurement to another using the metric, apothecary and/or household measurement system - example: gm to mg, mg to mcg, liters to quarts, ounces to pints, grams to ounces to pounds, milliliters to cc's., etc.

## **See next page for Links to ONLINE HELP**

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## HESI MATH – Online Sources of Help and Tutoring

- <https://www.mometrix.com/academy/hesi-a2-practice-test/>
- <https://www.youtube.com/watch?v=nR5eceLq-j8>
- <https://www.youtube.com/watch?v=jotENV8zilw&t=43s>
- <https://www.youtube.com/watch?v=jotENV8zilw>
- <https://www.youtube.com/watch?v=hG8R1U-AAh8>
- <http://www.math.com/> <https://www.khanacademy.org/>
- <https://www.youtube.com/watch?v=njFFtZiTpzM&list=PL5sbqUgCkJpOGzFwH0BWYdzg2jIja7jHO>
- <http://www.coolmath.com/prealgebra/02-decimals>
- <https://www.mathsisfun.com/>
- <https://www.test-guide.com/free-hesi-a2-practice-tests.html> <https://www.testprepreview.com/hesia2.htm>
- <https://nursehub.com/free-hesi-a2-practice-test/>
- <https://www.ccri.edu/tutoring/pdf/HESI%20Math%20Practice%20Test%204%20with%20Answers.pdf>
- <https://www.ccri.edu/tutoring/pdf/HESI%20Math%20Practice%20Test%201.pdf>
- <https://nursehub.com/courses/hesi-a2-math-review-3/lessons/free-hesi-a2-math-diagnostic-test/quizzes/free-hesi-a2-math->

If you have questions, please email me at [kara.vanhoy@tcatuppercumberland.edu](mailto:kara.vanhoy@tcatuppercumberland.edu)

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