Practical Nursing and Access to Practical Nursing Math Assessment Information
The Math Assessment for admission to the Practical Nursing and Access to Practical Nursing programs consists of a timed multiple choice test.

**Note – Calculators are not permitted**

The Math Assessment will test your skills in basic math operations, including:

- Whole number operations (adding, subtracting, multiplying, dividing)
- Order of operations
- Fractions
- Decimals
- Ratios & Proportions
- Percents
- Integers / signed numbers
- Exponents
- Scientific notation
- Basic Algebra

**The following resources may be useful for review.**

- [www.testpreview.com/ged](http://www.testpreview.com/ged)
  - Math topics
- [www.aaamath.com](http://www.aaamath.com)
  - Math review
- Complete Canadian GED Preparation published by Steck-Vaughan and available for purchase at College of the Rockies bookstore.
  - A comprehensive test for building skill in all Math topics.
Whole Number Operation

\[ 92 \times 16 \quad 804 \div 3 \]

Decimals

\[ .62 + .062 + .0062 \]

\[ 3.62 - .999 \]

\[ .62 \times .062 \]

\[ .062 \\
\hline .003 \]

Fractions

\[ \frac{2}{3} + \frac{1}{4} + \frac{1}{5} \]

\[ 3 \frac{1}{4} - \frac{1}{16} \]

\[ 3 \frac{1}{4} \times \frac{1}{16} \]
\[
\frac{3}{4} + \frac{1}{16}
\]

Integers

\[
(3) + (-6) + (-4)
\]

\[
(-3)(-6) \quad (3)(-6)
\]

\[
\frac{-18}{-3} \quad \frac{18}{-3}
\]

Order of Operations

\[
(-3 + 4 + 6 \div 3)^3
\]

\[
-2 + 3 + 6 - 2 + 1
\]

\[
6 - 3(4 + 4)
\]
Percents

20% of 63 = ?

12 is what percent of 80?

16 is 8% of ?

Substitution Algebraic Terms where x = 3, y = -2, a = 2

3x² + 5x²

17x² + 12y⁴ − x² − 7y⁴

12a • 6a

12a³ ÷ 2a, 8a ÷ 2a

Exponents & Scientific Notations

4⁴ − 2³, 4⁴ + 2³
Basic Word Problems

500 ml of a solution contains 75 grams of drug x. How much drug x will be found in 800 ml of a solution?

How much solution will there be if 100 grams of drug x are used?
ACCESS EDUCATION

(Ken Weins)

PRACTICAL NURSING – MATH KNOWLEDGE – ANSWER KEY

- Whole Numbers
- Add/Subtract/Multiply/Divide Algebraic Terms
- Decimals (addition)
- Fractions (addition)
- Ratio Proportion
- Percentages
- Add/Subtract/Multiply/Divide Integers
- Exponents
- Basic Algebra

On the following pages are examples of the topics covered.
Whole Number Operation

\[ 92 \times 16 \quad 804 \div 3 \]

Answers 1472, 268

Decimals

\[ .62 + .062 + .0062 \quad \text{Answer: 0.6882} \]

\[ 3.62 - .999 \quad \text{Answer: 2.621} \]

\[ .62 \times .062 \quad \text{Answer: 0.03844} \]

\[ \frac{.062}{.003} \quad \text{Answer: 20.6} \]

Fractions

\[ \frac{2}{3} + \frac{1}{4} + \frac{1}{5} \quad \text{Answer: 1}\frac{7}{60} \]

\[ \frac{3}{4} - \frac{1}{16} \quad \text{Answer: 3}\frac{3}{16} \]
\[
\frac{3}{4} \cdot \frac{1}{16} \quad \text{Answer:} \quad \frac{13}{64}
\]

\[
\frac{3}{4} \div \frac{1}{16} \quad \text{Answer:} \quad 52
\]

Integers

\[
(3) + (-6) + (-4) \quad \text{Answer:} \quad -7
\]

\[
(-3)(-6) \quad \text{Answer:} \quad 18 \quad (3)(-6) \quad \text{Answer:} \quad -18
\]

\[
\frac{-18}{-3} \quad \text{Answer:} \quad 6 \quad \frac{18}{-3} \quad \text{Answer:} \quad -6
\]

Order of Operations

\[
(-3 + 4 + 6 ÷ 3)^3 \quad \text{Answer:} \quad 64
\]

\[
-2 + 3 + 6 - 2 + 1 \quad \text{Answer:} \quad 6
\]

\[
6 - 3 (4 + 4) \quad \text{Answer:} \quad -18
\]
Percents

20% of 63 = ?  Answer: 12.6

12 is what percent of 80?  Answer: .15

16 is 8% of ?  Answer: 200

Substitution Algebraic Terms where x = 3, y = -2, a = 2

3x² + 5x²  Answer: 72

17x² + 12y⁴ - x² - 7y⁴  Answer: 224

12a • 6a  Answer: 288

12a³ ÷ 2a  8a ÷ 2a
Answer: 24  Answer: 8

Exponents & Scientific Notations

4⁴ - 2³  4⁴ + 2³
3.2 \times 10^3 \quad (3 \times 10^3) \div (9 \times 10^4) \quad 4^{-2} \div 4^{-3}

Answer: 3200 \quad Answer: 0.03 \quad Answer: 4

a^3 \times a^3 \quad (3 \times 10^4)^3 \quad -2^6 - 2^2

Answer: a^6 \quad Answer: 2.7 \times 10^{13} \quad Answer: -68

\quad -7.231 \times 10^{-3} \quad 3^{-2} + 2^{-3}

Answer: -0.007231 \quad Answer: \frac{17}{72}

Basic Word Problems

500 ml of a solution contains 75 grams of drug x. How much drug x will be found in 800 ml of a solution? **Answer: 120 gms**

How much solution will there be if 100 grams of drug x are used? **Answer: 667 ml**