THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®

School of Health Professions
B.S. in Medical Dosimetry
Mathematics Assessment Study Guide

Please refresh your algebra knowledge using this outline to prepare yourself for the Math Assessment

1. Rules for numbers, basic arithmetic calculations
2. Add, subtract, divide and multiply fractions
3. Order of operations
4. Distributive property
5. Solving equations
   a. With one unknown
   b. With two unknown, two equations
   c. When the unknown is the exponent
6. Different types of angles
   a. Angle pairs
   b. Supplementary angles
   c. Complementary angles
   d. Vertical angles
   e. Interior/exterior angles
7. Different types of Triangles
   a. Scalene
   b. Isosceles
   c. Equilateral
   d. Right: Pythagorean theorem
   e. Acute
   f. Similar triangles: Similar triangle properties
   g. Obtuse
   h. Central and peripheral angles: The central angle theorem
8. Trigonometry
   a. Sin θ
   b. Cos θ
   c. Tan θ
9. Perimeter and area
   a. Circle
   b. Square
   c. Rectangle
   d. Any other shape
10. Function
    a. Domain and range
    b. Dependent and independent variables
    c. Linear function (Equation of line)

            i. General equation
            ii. Graph a linear function
            iii. Slope
            iv. X and y intercepts
            v. Inverse function
            vi. Asymptotes
    d. Quadratic functions: Know the general equation and graph basic quadratic functions, including the Parabola

11. Cartesian coordinate system
    a. How to define a point by the ordered pair (x, y)
    b. Graph a linear or basic quadratic function
12. Exponents
    a. Exponential notation
    b. Properties of exponents
        i. Zero power property
        ii. Additional property
        iii. Subtraction property
        iv. Power to power property
        v. Distributive property
        vi. Negative exponents
        vii. Fractional exponents
13. Logarithms
    a. Logarithm base
    b. Properties of logarithms
        i. Product
        ii. Quotient
        iii. Power
        iv. Root
    c. Natural Log
    d. Using natural log to solve equations such as $e^x=10$ when X is the unknown
14. Scientific notation