MAT 1033 Final Review Checklist  Intermediate Algebra

Section 1.6
□ I can multiply like bases.
□ I can divide like bases.
□ I know how to handle a zero exponent.
□ I know how to write a number in scientific notation.
□ I know how to expand a number already written in scientific notation.

Section 1.7
□ I can raise a power to a power.
□ I can multiply two numbers in scientific notation.
□ I can divide two numbers in scientific notation.
□ I can simplify expressions combining all of my exponent rules.

Section 2.1
□ I can determine whether a number is a solution to a linear equation.
□ I can solve a linear equation.
□ I can solve a linear equation containing a fraction.
□ I can determine when an equation has no solutions.
□ I can determine when an equation has infinitely many solutions.

Section 2.2
□ I can read a problem and write the algebraic expression.
□ I know what consecutive (even/odd) integers mean.
□ I know how to find perimeter.
□ I know how to find area.

Section 2.3
□ Given a formula I can solve for a specified variable.
□ I know the compound interest formula.
□ I can use the compound interest formula.

Section 2.4
□ I know how to solve a linear inequality.
□ I know how to graph my solution to a linear inequality on a number line.
□ I know how to give my answer in interval notation.
□ I know that when I multiply or divide by a negative that I switch the direction of the inequality.

Section 3.1
□ I can plot ordered pairs on a rectangular coordinate system.
□ I can locate the quadrant that a point appears in.
□ I can determine whether a given point is a solution to an equation in two variables.
□ I can graph a linear equation by using a t-table.
□ I know how to find the x-intercept.
□ I know how to find the y-intercept.
□ I know how to graph horizontal lines.
□ I know how to graph vertical lines.
Section 3.2
☐ I have memorized the formula for slope.
☐ I can find slope given two points.
☐ I know what the slope-intercept form of a line is.
☐ I can put a linear equation in slope-intercept form by solving for y.
☐ I can find the slope of a horizontal line.
☐ I can find the slope of a vertical line.
☐ I can find the slope of a line by looking at a graph.
☐ I can determine if two lines are parallel, perpendicular, or neither.

Section 3.3
☐ I can graph a line using its slope and y-intercept.
☐ Given a slope and y-intercept, I can write the equation of the line.
☐ I can solve a word problem dealing with a linear equation.

Section 3.4
☐ I have memorized the point-slope formula.
☐ Given a point and a slope I can use the above formula to write the equation of the line.
☐ I can write the equation of a vertical and horizontal line.

Section 3.5
☐ I know the steps to graphing a linear inequality.
☐ I can graph a linear inequality.
☐ I can use the compound interest formula.

Section 3.6
☐ I know how to give the domain and range of a relation given a set of points.
☐ I know how to give the domain and range of a relation given a graph.
☐ I know how to give the domain and range of a relation given a map.
☐ I know how to determine if a relation is a function by looking at the domain.
☐ I know how to determine if a graph is a function by using the vertical line test.
☐ I know how to use function notation and find functional values.

Section 4.1
☐ I know the three ways to solve a system of linear equations.
☐ I can solve a system by graphing the lines and finding their intersection point.
☐ I can solve a system by using the substitution method.
☐ I can solve a system by using the elimination method.
☐ I can determine if a given point is a solution to a given system of linear equations.

Section 4.3
☐ I can read a word problem and develop a system of equations to model the problem.
☐ I know the formula for distance.
☐ I can solve a word problem involving mixtures.
☐ I can solve a word problem involving descriptions of numbers.

Section 4.5
☐ I can graph a system of linear inequalities

Section 5.1
☐ I can graph determine the degree of a polynomial.
☐ I can add and subtract two polynomials.
☐ I can evaluate a polynomial function for a given value.
Section 5.2
- I can multiply a polynomial and a monomial by distributing.
- I can FOIL two binomials.

Section 5.3
- I can divide a polynomial by a monomial.
- I can divide a polynomial by a polynomial using long division.
- I know what form to write my remainder in after performing long division.

Section 5.4
- I can factor out a GCF (Greatest Common Factor).
- I can factor by grouping.

Section 5.5
- I can factor a trinomial using the trial and check method.
- I can factor a trinomial using the grouping method.
- I can factor a trinomial using the substitution method.

Section 5.6
- I know how to identify the difference of two squares and how to factor it.
- I know how to factor the sum and difference of two cubes.
- I can use the compound interest formula.

Section 5.7
- I can state the zero product property in my own words.
- I can use the zero product property to solve an equation.
- I can solve an equation containing fractions.
- I know the Pythagorean Theorem.
- I can solve an application problem.

Section 6.1
- I can simplify a rational expression by factoring and reducing.
- I can multiply rational expressions.
- I can divide rational expressions.

Section 6.2
- I can add rational expressions with the same denominator.
- I can subtract rational expressions with the same denominator.
- I can add rational expressions with unlike denominators.
- I can subtract rational expressions with unlike denominators.

Section 6.3
- I can simplify complex fractions by simplifying the numerator and denominator and then dividing.
- I can simplify complex fractions by multiplying by the LCD (Least Common Denominator).
- I can simplify expressions with negative exponents.

Section 6.4
- I can solve equations containing rational expressions.

Section 6.5
- I can solve an equation containing rational expressions for a specified variable.
- I can solve a number problem by writing equations containing rational expressions.
- I can solve problems modeled by proportions.
- I can solve problems about distance, rate and time.
Section 6.6
- I know the three types of variation.
- I can solve a direct variation problem.
- I can solve an inverse variation problem.
- I can solve problems involving joint variation.

Section 7.1
- I can find square roots.
- I can approximate roots using a calculator.
- I can find cube roots.
- I can find $n^{th}$ roots.

Section 7.2
- I can understand the meaning of rational exponents.
- I can rewrite an expression containing a rational exponent as a radical expression.
- I know the rules for exponents and I can apply them to rational exponents.

Section 7.3
- I can multiply two radical expressions using the product rule.
- I can divide two radical expressions using the quotient rule.
- I can simplify a radical expression.
- I know the midpoint formula and I can use it.
- I know the distance formula and I can use it.

Section 7.4
- I can add or subtract radical expressions.
- I can multiply radical expressions that contain more than one term.

Section 7.5
- I can rationalize the denominator of a radical expression.
- I can rationalize the numerator of a radical expression.

Section 7.6
- I can solve an equation that contains a radical expression.
- I can use the Pythagorean Theorem to model problems.

Section 7.7
- I can write square roots of negative numbers in the form $a + bi$.
- I can add or subtract complex numbers.
- I can multiply complex numbers
- I can divide complex numbers.
- I can raise the complex number $i$ to powers.

Section 8.1
- I can solve quadratic equations by completing the square.
- I can write perfect square trinomials.
- I can use the square root property to solve quadratic equations.

Section 8.2
- I know the quadratic formula and can solve problems modeled by a quadratic equation.
- I determine the number and type of solutions of a quadratic equation by using the discriminant.
- I can solve quadratic equations by factoring and using the zero product property.