**FMPC 10**

# FINAL EXAM REVIEW CHART

| I can … | Example/definition/formula/notes… | I can do this ☺ | I need to review this !!! |
|---|---|---|---|
| classify numbers as:<br>• Real<br>• Not real<br>• Rational<br>• Irrational<br>• Integers<br>• Whole<br>• Natural | | | |
| … use appropriate symbols to show what sets (categories) any given number belongs to. | | | |
| … given 3 examples of:<br>• Real numbers<br>• Not real numbers<br>• Rational numbers<br>• Irrational numbers<br>• Integers<br>• Whole numbers<br>• Natural numbers | | | |
| … express any number as a product of its prime numbers. | | | |

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| … determine and **justify** whether a number is a perfect cube or a perfect square number. | | | |
| … define a prime number. | | | |
| … give 10 examples of prime numbers. | | | |
| … use prime factorization to find the least common multiple of two or three numbers. (LCM) | | | |
| … use prime factorization to find the greatest common factor of two or three numbers. (GCF) | | | |

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| … apply exponent laws to simplify and/or evaluate expressions that involve integral exponents.<br>• Product law<br>• Quotient law<br>• Power law<br>• Negative exponents expressed as positive exponents.<br>• Any non-zero base raised to the power of zero<br>• A negative base raised to an even exponent<br>• A negative base raised to an odd exponent<br>• A product raised to an exponent<br>• A quotient raised to an exponent<br>• A positive one raised to any exponent<br>• A negative one raised to an even/odd exponent | | | |

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| … simplify an expression and express it using only positive exponents and fractions. | | | |
| … list first 20 perfect square numbers. | | | |
| … list first 10 cube numbers. | | | |
| … function and relation Definition, difference, similarities. | | | |
| … express the domain in words (L1), as an interval (L2 and 3) or using set notation (L4) given a graph. | | | |
| … express the range in words (L1), as an interval (L2 and 3) or using set notation (L4) given a graph. | | | |
| … explain what an input of a relation is. | | | |
| … explain what an output of a relation is. | | | |

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| … give 5 examples of a graph that shows a relation that is not a function. | | | |
| … carry out the vertical line test. | | | |
| … give 5 examples of a graph that shows a relation that is a function. | | | |
| … explain what the domain of a relation is. | | | |
| … explain what the range of a relation is. | | | |
| … graph a line given an equation in:<br>• Slope-intercept form<br>• General form<br>• Standard form<br>• Point-Slope form | | | |
| … use algebra to change any form of a linear equation to any other form of the equation. | | | |
| … determine if two lines are parallel given two equations. | | | |

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| … determine whether two lines are perpendicular given two equations. | | | |
| … use algebra to determine the coordinates of the x-intercept of a line given its equation in any form. | | | |
| … use algebra to determine the coordinates of the y-intercept of a line given its equation in any form. | | | |
| … graph a horizontal line given its equation. | | | |
| … graph a vertical line given its equation. | | | |
| … explain why a vertical line is the only line that is not a linear function. | | | |
| … calculate the slope of a line given two points a line passes through. | | | |
| … identify the slope of a line given its equation. | | | |

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| … identify the slope of a line given its graph. | | | |
| … explain how negative/positive/zero/undefined slope relate to the end-behaviour of a line. (decreasing/increasing/horizontal/vertical) | | | |
| … use the function notation: f(x) | | | |
| … determine whether a system of two linear equations has one solution, no solution or infinitely many solutions. | | | |
| … determine whether a point (its coordinates) is a solution to a system of linear equations. | | | |
| … determine the solution to the system of linear equations given the graphs of the two equations. | | | |
| … determine the solution to the system of linear equations by graphing. | | | |
| … determine the solution to the system of linear equations by substitution. | | | |
| …… determine the solution to the system of linear equations by elimination. | | | |

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| … explain why a graph of a linear function has to have arrows. | | | |
| … explain what a y-intercept is and give an example of a graph that does not have a y-intercept. | | | |
| … explain what an x-intercept is and give an example of a graph that does not have an x-intercept. | | | |
| … determine whether a given expression is a polynomial. | | | |
| … determine the leading term of a polynomial. | | | |
| … determine the degree of a polynomial. | | | |
| … determine the constant term of a polynomial. | | | |
| … define a polynomial. | | | |
| … given an example of: <br> • Monomial <br> • Binomial <br> • Trinomial <br> • A polynomials that is not any of the three above | | | |

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| … add two polynomials. | | | |
| … subtract two polynomials. | | | |
| … apply the distributive property:<br>• Monomial multiplied by a binomial or trinomial.<br><br><br>• Binomial multiplied by a binomial. (FOIL) | | | |
| … collect like terms. | | | |
| … factor a polynomial using the greatest common factor. | | | |
| … factor a negative GCF from a polynomial. | | | |
| … recognize a binomial that can be expressed as a difference of squares. | | | |
| … factor the difference of squares. | | | |

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| … write a conjugate given a binomial. | | | |
| … factor a trinomial by inspection. | | | |
| … factor a polynomial by combining the GCF and DOS. | | | |
| … factor a polynomial by combining the GCF and inspection. | | | |
| … label a right-angled triangle with one identified acute angle. (O-A-H) | | | |
| … use any of the basic trigonometric ratios to find a side length given an angle and one side length in a right-angled triangle. | | | |
| … solve a right-angled triangle without the Pythagorean Theorem. | | | |
| …explain what SOH CAH TOA stands for. | | | |

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| … explain the difference between an acute and obtuse angle and acute and obtuse triangle. | | | |
| … determine the third interior angle in any triangle drawn on a 2D plane given two interior angles. | | | |
| … explain the difference of the angle of elevation and angle of depression. | | | |
| … use the inverse of any of the basic trigonometric ratios to find the degree measure of an angle given two side lengths in a right-angled triangle. | | | |
| … use the formula: $t_n = t_1 + (n-1)d$ to solve for any missing variable given enough information about an arithmetic sequence. | | | |
| … describe an arithmetic sequence. | | | |
| … give 5 examples of an arithmetic sequence. | | | |

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| … give 5 examples of a sequence that is not arithmetic and explain why the sequence cannot be described as arithmetic. | | | |
| … find the value of the first term in an arithmetic sequence given information about two terms in the sequence, | | | |
| … find the placement of a term given its value and some additional information about the sequence. | | | |
| … find the common difference given several consecutive terms in an arithmetic sequence. | | | |
| … find the common difference in an arithmetic sequence given information about two terms in the sequence. | | | |
| … graph an arithmetic sequence given an equation for the general term: $t_n = t_1 + (n-1)d$ | | | |
| … honestly say that I have always tried my best to learn the new material. | | | |