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## Unit 2 (Chapter 5): POLYNOMIALS AND POLYNOMLAL FUNCTIONS <br> I am not perfect; the syllabus can be modified at any time. Live in fear...

| DAY | Aim\# | SECTION | TOPIC | PAGE | PROBLEMS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Wed. 9/13 | 5 | 4.6 | Perform Operations with Complex Numbers | p. 279 | $\begin{aligned} & \# 1,2,7,11,17,19,25,31,33 \\ & 35,37,43,49,51,55,65-67 \end{aligned}$ |
| Thurs. 9/14 | 6 | 4.8 | Use the Quadratic Formula and the Discriminant | p. 296 | $\begin{aligned} & \# 17,20,31,33,35,36,44 \\ & 47,52-54,57,62,68,70 \end{aligned}$ |
| $\begin{aligned} & \text { Fri. } \\ & 9 / 15 \end{aligned}$ | 7 | 5.1 | Use Properties of Exponents | p. 333 | $\begin{aligned} & \text { 3-13 ODD, 25-35 odd, } 36, \\ & 43-45,55,56 \end{aligned}$ |
| Mon. 9/18 | 8 | 5.2 | Evaluate and Graph Polynomial Functions | p. 341 | $\begin{aligned} & 1-8,9-, 15,19,24-27, \\ & 29-35 \mathrm{ODD}, 38,41,43,46, \\ & 48,50 \end{aligned}$ |
| Tues. $9 / 19$ | 9 | $5 \cdot 3$ | Add, Subtract, and Multiply Polynomials | p. 349 | 3-47 E.O.O. |
| Wed. $9 / 20$ | 10 | 5.4 | Factor and Solve Polynomial Equations | p. 356 | $\begin{aligned} & 1,3-9,14,15,19,23,27,29 \\ & 31,35,39,43,49 \end{aligned}$ |
| Thurs. 9/21 |  | Review/ Practice | 4.6, 4.8, 5.1-5.4 |  | -Study for QUIZ |
| Fri. <br> 9/22 |  |  | 4.6, 4.8, 5.1-5.4 Quiz A |  |  |
| Mon. 9/25 | 11 | 5.5 | Apply the Remainder and Factor Theorem | p. 366 | $\begin{aligned} & \text { 2, 3-19 E.O.O. , 21-33 } \\ & \text { E.O.O, } 35 \end{aligned}$ |
| Tues. $9 / 26$ | 12 | 5.6 | Find Rational Zeros | p. 374 | 3-35 E.O.O., 41-43 |
| Wed. $9 / 27$ | 13 | 5.7 | Apply the Fundamental Theorem of Algebra | p. 383 | 3-31 E.O.O., 35-49 E.O.O. |
| Thurs. <br> 9/28 | 14 | 5.8 | Analyze Graphs of Polynomial Functions | p. 390 | 3-27 E.O.O. 30 |
| Fri. $9 / 29$ | 15 | 5.9 | Write Polynomial Functions and Models | p. 397 | 3-9 ODD, 19, 21, 25, 27 |
| Mon. $10 / 2$ |  | Review/ Practice | 5.5-5.9 |  | -Study for QUIZ |
| Tues. $10 / 3$ |  |  | 5.5-5.9 Quiz B |  |  |
| Wed. $10 / 4$ |  | Review | Unit 2 Review | p. 402 | $1-41 \text { ODD }$ <br> -Study for TEST |
| Thurs. $10 / 5$ |  | Review | $\Leftrightarrow$ Unit 2 TEST |  |  |


| Unit 2: Polynomials \& Polynomial Functions | Section | Rate Post |
| :---: | :---: | :---: |
| I can solve a quadratic equation using complex numbers. | 4.6 |  |
| I can add, subtract, multiply, and divide complex numbers. | 4.6 |  |
| I can plot complex numbers in a coordinate plane. | 4.6 |  |
| I can solve quadratic equations using the quadratic formula. | 4.8 |  |
| I can find the discriminant of a quadratic equation and identify the number and type of solutions. | 4.8 |  |
| I can evaluate numerical expressions involving powers | 5.1 |  |
| I can simply expressions involving powers using the properties of exponent | 5.1 |  |
| I can identify and evaluate polynomial functions. | 5.2 |  |
| I can use direct and synthetic substitution to evaluate polynomial functions. | 5.2 |  |
| I can identify the end behavior and graph a polynomial function. | 5.2 |  |
| I can add, subtract, and multiply polynomials | 5.3 |  |
| I can completely factor a polynomial function using sum/difference of two cubes, difference of two squares, grouping, and/or trinomials methods. | 5.4 |  |
| I can find all real number solutions to polynomials functions after factoring. | 5.4 |  |
| I can divide polynomials using long division and/or synthetic division. | 5.5 |  |
| I can use the Factor Theorem and Remainder Theorem to solve polynomial functions. | 5.5 |  |
| I can use the Rational Zero Theorem to find all real zeros of a polynomial function. | 5.6 |  |
| I can use the Fundamental Theorem of Algebra to find the number of solutio to a polynomial function. | 5.7 |  |
| I can use the Fundamental Theorem of Algebra to find all zeros of a polynom function. | 5.7 |  |
| I can use the Conjugates Theorem to write the equation of a polynomial func given the zeros. | 5.7 |  |
| I can use x -intercepts to graph a polynomial function. | 5.8 |  |
| I can identify turning points of a polynomial functions to help graph the function. | 5.8 |  |
| I can write the equation of a higher-degree polynomial function given points that lie on the function | 5.9 |  |
| I can use the Properties of Finite Differences to write the equation of a higher-degree polynomial function. | 5.9 |  |
| I can use a graphing calculator to find a polynomial function that fits given d points. | 5.9 |  |

