## Unit 3 - Polynomial Functions

| Date | Lesson/Topics | Khan Academy Videos/Exercise Sets | Done? |
| :---: | :---: | :---: | :---: |
| Mon/ Tues 4/13-14 | Live Session: <br> - Review of Addition/Sub <br> - Review of Dividing Poly <br> Polynomial Division - Long Division, Division using the Box Method, or Synthetic Division (complete the video problems using your method) | traction, Multiplication, and Factoring of Polynomials nomials <br> Dividing Polynomials by Linear Expressions (3:23) <br> Dividing Polynomials by Linear Expressions: Missing Term (4:32) <br> Factoring using Polynomial Division (5:57) <br> Factoring using Polynomial Division: Missing Term ((3:57) <br> Divide Polynomials by Linear Expressions - Practice Set <br> Factor using Polynomial Division - Practice Set |  |
| Wed/ Thur 4/15-16 | Live Session: <br> - Answer Questions/Rev <br> - Show Connection Betw <br> - Review Factoring of Po Remainder Theorem | iew about Polynomial Division <br> een Dividing $P(x)$ by $(x-c)$ and $P(c)$ <br> lynomials <br> Introduction to Polynomial Remainder Theorem (6:42) <br> Remainder Theorem: Finding Remainder from Equation (3:31) <br> Remainder Theorem Examples (5:31) <br> Remainder Therem: Checking Factors (3:25) <br> Remainder Theorem: Finding Coefficients (3:38) <br> Remainder Theorem - Practice Set <br> Remainder Theorem and Factors - Practice Set |  |
| $\begin{aligned} & \hline \text { Fri } \\ & 4 / 17 \\ & \hline \end{aligned}$ |  | Polynomial Division Quiz 2 |  |
| Mon/ Tues 4/20-21 | Live Session: <br> - Answer Questions/Revi is not Factorable in Hon <br> - Introduction to Key Fea <br> Zeros of Polynomials | iew about Remainder Theorem (Include Finding Roots if Quadratic nors) <br> tures of Polynomial Graphs (Domain, Range, $y$-intercept) <br> Retake Polynomial Division Quiz 2 (if needed) <br> Zeros of Polynomials: Introduction (5:08) <br> Zeros of Polynomials: Plotting Zeros (3:18) <br> Zeros of Polynomials: Matching Equation to Zeros (3:50) <br> Zeros of Polynomials: Matching Equation to Graph (3:00) | Quotient |


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| :---: | :---: | :---: | :---: |
|  | Zeros of Polynomials | Zeros of Polynomials (with Factoring): Grouping (4:54) <br> Zeros of Polynomials (with Factoring): Common Factor (3:31) <br> Zeros of Polynomials (Factored Form) - Practice Set <br> Zeros of Polynomials (with Factoring) - Practice Set |  |
|  | Minimum and Maximum Points | Introduction to Minimum and Maximum Points (5:29) <br> Worked Example: Absolute and Relative Extrema (4:57) <br> Relative Maxima and Minima - Practice Set <br> Absolute Maxima and Minima - Practice Set |  |
| Wed/ Thur 4/22-23 | Live Session: <br> - Answer Questions/Review about Zeros and Maxima/Minima <br> - Review Increasing/Decreasing Intervals <br> - Introduce Birthday Project |  |  |
|  | Positive and Negative Intervals of Polynomials <br> Multiplicity of Zeros | Positive and Negative Intervals of Polynomials (8:39) <br> Multiplicity of Zeros of Polynomials (6:35) <br> Zeros of Polynomials (Multiplicity) (4:59) <br> Zeros of Polynomials and Their Graphs (Article) <br> Positive and Negative Intervals of Graphs (Article) <br> Positive and Negative Intervals of Polynomials - Practice <br> Zeros of Polynomials (Multiplicity) - Practice |  |
|  |  | Introduction to End Behavior of Polynomials (8:09) <br> End Behavior of Polynomials (Article) <br> End Behavior of Polynomials - Practice |  |
|  | Putting it All Together | Graphs of Polynomials (Article) <br> Honors: Graphs of Polynomials: Challenge Problems (Article) |  |
| $\begin{array}{\|l\|} \hline \text { Fri } \\ 4 / 24 \\ \hline \end{array}$ |  | Polynomial Graphs Unit Test |  |
|  | Live Session: <br> - Answer Questions/Review about Positive/Negative Intervals and End Behavior <br> - Answer Questions about Birthday Project <br> - Feedback re: $1^{\text {st }}$ Remote Learning Unit |  |  |
|  |  | Retake Polynomial Graphs Unit Test (if needed) <br> Complete Birthday Project |  |

