| By the end of the unit, it is expected that you will: | $\underset{\text { EXCELLENT }}{(-)}$ | $\underset{\text { LOOK OVER }}{\ominus}$ | $\underset{\text { WHAT? }}{\stackrel{\rightharpoonup}{2}}$ |
| :---: | :---: | :---: | :---: |
| Demonstrate an understanding of factoring polynomials of degree greater than 2 (limited to polynomials of degree $\leq 5$ with integral coefficients). <br> QUESTIONS: <br> Factor the following algebraically $x^{4}+x^{3}-13 x^{2}-1 x+12$ |  |  |  |
| Graph and analyze polynomial functions (limited to polynomial functions of degree $\leq 5$ ). <br> QUESTIONS: <br> Determine the zeros, the y-intercept and direction it ends and sketch the following: $-x^{3}-2 x^{2}+25 x+50$ |  |  |  |
| Divide polynomials using long division and synthetic division. <br> Question: <br> Divide $3 x^{3}-2 x^{2}+1$ by $x-2$ using <br> a) Long division <br> b) Synthetic division |  |  |  |

Use the Remainder Theorem and Factor Theorem effectively.
Questions:
What is the remainder when $\mathrm{x}^{23}-1$ is divided by $\mathrm{x}+1$ ?

Determine if $(\mathrm{x}+2)$ is a factor of $x^{4}+x^{3}-13 x^{2}-1 x+12$.

## Woskoook Stuse

| Section and page <br> number | Mandatory questions |
| :--- | :--- |
| 3.1 p. 119 <br> day 1 | 1 in class, 2-6 all |
| 3.1 p. 121 <br> day 2 | 7,8 all and 9(omit hij) |
| 3.2 p. 127 | $1-3,4$ aceghij, 7,8 |
| 3.3 p. 135 <br> (long division) | 1 all |
| 3.3 p. 136 <br> (synthetic division) | 2 acdgk, 3abch, (4a in class pre 2.4) |
| 3.4 p. 143 | $1-3$ |
| 3.4 p. 144 | $4,5 f, \mathrm{~h}$, I and graph (no rational root theorem) |
| Review <br> p. 150 | Content organizer / Pre Test / Review in Text <br> $1-3,5-8,10,12,15,17-19,21-25,27,28,30-33,36-41$ |

