

I. Polynomial Nomenclature (p.315):

1. Terms – quantities separated by “+”
2. Standard form – polynomial with “n+1” terms...

$$P(x) = a_n x^n + a_{n-1} x^{n-1} + a_{n-2} x^{n-2} + \dots + a_2 x^2 + a_1 x + a_0$$

e.g., $5x^3 + 3x^2 - 6x + 1$
 $n = 3, a_3 = \underline{\quad}, a_2 = \underline{\quad}, a_1 = \underline{\quad} \text{ \& } a_0 = \underline{\quad}$
3. Degree – degree of a term is its exponent, degree of a polynomial is highest degree of all terms (*i.e.*, “n”)
4. Coefficient – multiplier of the variable(s), “ a_i ”
5. Leading coefficient of $P(x)$ is “ a_n ”
6. Monomial, binomial *vs.* trinomial – polynomial with one, two and three terms (respectively)

II. Examples (p.324): Exercises #4,14

III. Polynomial Function Graphs (pp.318-319):

1. Curves are “smooth & continuous”
2. Leading Coefficient Test – “end behavior” (*i.e.*, the value of “ y ” as “ x ” $\rightarrow \pm\infty$) of the polynomial graph depends on the sign of the leading coefficient (either *+* or *-*) AND the degree (either, *even* or *odd*)...

IV. Examples (pp.324-326): Exercises #22,24,26,28, 32,66

HW: pp.323-326 / Exercises #1,3,5,11-31(odd),39,
41,43,65,69,71

Read pp.328-336 (section 5.2)