Lecture 10/17123: Polynomial Functions Detn: Apolynamial function is a Yunetian that can be writtens $p(x) = a_n x^n + a_{n-1} x^{n-1} + \cdots + a_2 x^2 + a_1 x + a_0$ where a ora,,..., an are nonzeroutts with an to. · n,n-1,...,2,1 are what pos. #5. · The deepree of p(x) is highest power of x
· leading term is $q_n x^n$ · leading coeff. II q_n .

Deg $(f \cdot g) = deg(f) \cdot g$ · leading coeff. II q_n . Ex! Which are paymoniculs a) f(s)=5s+7 Yes b) 2x2+x1.5+x No! C) 2+et12+t4 Yex! Ex: What is the degree of rand # of nonzero tems and leading wefficent of r(x) = x2-7x3+2x4+1; W)(x+4)(x-3)(2x+1) degree (rcx)) = 4; 4 nonzono tema; leady tena 2x⁹.

degree (kcx) = 3; 4 nonzono temas; leady tena 2x³.

Longran Behvour of Pdys.

The leng rum behavir of a polynomical $q_n x^n + --+ q_i x + a_i$ is the leng run behavior of its leading item $q_n x^n$.

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Ex: What is the long run hehavior of

3.7x3+12x-2x6

Ready term! comes from coefficient.

As X-1=00 y -500

47 a) Even no Odd Yes

b) From Yex and orig. Wet. Odd No

C) Even Yes sook neg. Couff.

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