Multiplying Polynomials - Part 2

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- "FOIL" only works on binomial × binomial
- Follow a similar process, just with more terms.

Ex. Expand and simplify:

① $(x-4)(x-1)(x+3)$

- use FOIL on 1ST + 2ND
- ignore 3RD

$(x^2-x-4x+4)(x+3)$

$(x^2-5x+4)(x+3)$

- each terms multiplies everything in 2ND brackets
  - ↳ 6 products!

$x^3+3x^2-5x^2-15x+4x+12$

$x^3-2x^2-11x+12$

② $(5x-2)^3$

$(5x-2)(5x-2)(5x-2)$

$(25x^2-10x-10x+4)(5x-2)$

$(25x^2-20x+4)(5x-2)$

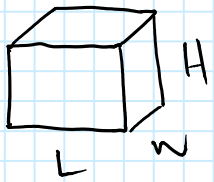
$125x^3-50x^2-100x^2+40x+20x-8$

$125x^3-150x^2+60x-8$

③ $3(5a+1)(a^2-3a+10)$

$(15a+3)(a^2-3a+10)$ continue as above

Volume of Prism:



$V = L \times W \times H$