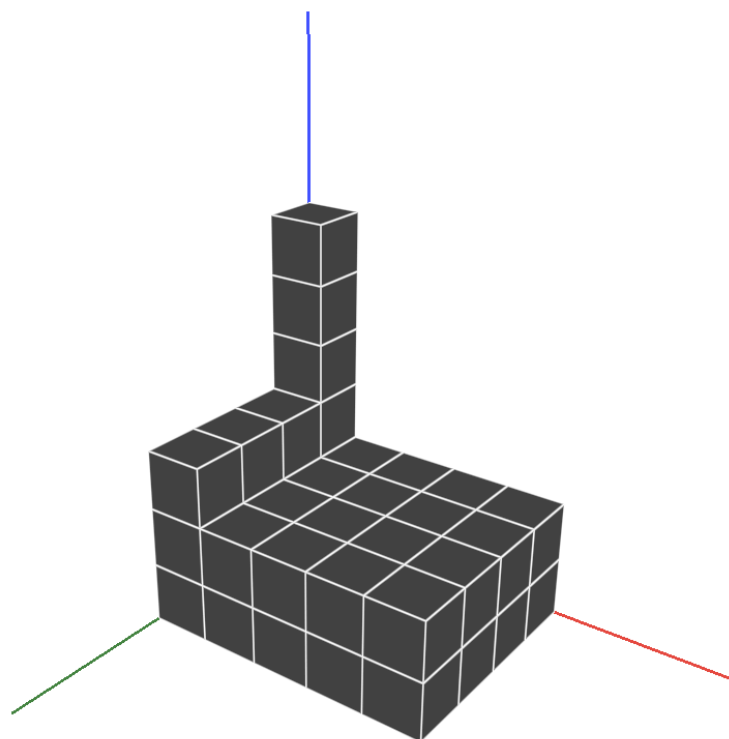


Monomial orders uniquely determined by their induced orders



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When we are asked to write the polynomial $p(x) = 3x^2 + x^4 + 7 - x$ in standard form we know our answer is $x^4 + 3x^2 - x + 7$, because the only way to order powers of x is the natural one: degree wise! Complexity is introduced when we are asked to write $q(x) = 2x^3yz^2 - 6x^4z + x^2y^3z$ in standard form and we have to define what standard form means in this setting. In this talk, we will present the three classical monomial orders (lexicographic, degree lexicographic and reverse lexicographic), explore a curious property they possess (hint hint: It is the title) and discuss whether other monomial orders possess this property

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