Descartes' rule of signs and moduli of roots

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Abstract. A hyperbolic polynomial (HP) is a real univariate polynomial with all roots real. By Descartes' rule of signs, an HP with all coefficients nonvanishing has exactly c positive and exactly p negative roots counted with multiplicity, where c and p are the numbers of sign changes and sign preservations in the sequence of its coefficients. For $c = 1$ and 2, we discuss the question: When the moduli of all the roots of an HP are arranged in the increasing order on the real half-line, at which positions can be the moduli of its positive roots depending on the positions of the sign changes in the sequence of coefficients?

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