ABSTRACT: Roots of some indefinite Kac–Moody algebras can be viewed as weights of certain integrable modules of their affine counterparts. Using this perspective, Kang has developed a root multiplicity formula. We apply Kang’s multiplicity formula to roots of the indefinite Kac–Moody algebra $HC_n^{(1)}$. In doing so we must find all partitions of the root into weights of specific integrable $C_n^{(1)}$-modules. We use Weyl conjugacy to reduce the number of partitions that we must consider. Then we use the path crystal for integrable $C_n^{(1)}$-modules to finish our calculations. Using this method we calculate a bound for a family of level two roots of $HC_n^{(1)}$ and, in addition, discuss generalizations of the bound to all roots of $HC_n^{(1)}$.