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**Title:** On the number of monogenizations of a quartic order  
(with an appendix by Shabnam Akhtari)

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We show that an order in a quartic field has fewer than 3000 essentially different generators as a  $\mathbb{Z}$ -algebra (and fewer than 200 if the discriminant of the order is sufficiently large). This significantly improves the previously best known bound of  $2^{72}$ .

Analogously, we show that an order in a quartic field is isomorphic to the invariant order of at most 10 classes of integral binary quartic forms (and at most 7 if the discriminant is sufficiently large). This significantly improves the previously best known bound of  $2^{80}$ .

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