

# Morphisms and algebraic points on the curves

$$C_{r,s}(7) : y^7 = x^r(x-1)^s$$

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## Abstract

The purpose of this paper is to determine the morphisms and algebraic points of degree 3 on the Fermat quotients  $C_{r,s}(7) : y^7 = x^r(x-1)^s$  where  $r$  and  $s$  are integers such that  $1 < r, s, r+s < 7$ . We explicitly determine the birational morphisms between the curves  $C_{1,2}(7)$  and  $C_{2,1}(7)$  as well as  $C_{1,2}(7)$  and  $C_{4,1}(7)$ , and then the set of algebraic points of degree 3 on the curves  $C_{2,1}(7)$  and  $C_{4,1}(7)$ .