

ON THE HOMOGRAPHIC SOLUTIONS OF THE THREE-BODY PROBLEM

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The object of this paper is to prove the following theorem:  
The only homographic solutions of the three-body problem of celestial mechanics with a law of attraction inversely proportional to any power  $r^\alpha$  of the distance  $r$  are: (i) The pure dilatations. (ii) The collinear solutions. (iii) The equilateral solutions. (iv) The isosceles solutions of BANACHIEWITZ ( $\alpha = 3$ ) and (v) the scalene solutions given in this note, also for  $\alpha = 3$ , the first three kinds being the only planar solutions for any value of  $\alpha$ . To be published in Publicaciones del Observatorio Astronómico de La Plata. Serie Astronómica.