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Rostam Sabeti* (rsabeti@olivetcollege.edu), Mathematics and Computer Science
Department, Olivet College, 312 S. Main Street, Olivet, MI 49076. *Homogeneity of order m and
Completeness in $K[x_1, \dots, x_n]$* . Preliminary report.

For positive integer m and K an algebraically closed field, one may define a grading on $K[x_1, \dots, x_n]$ that depends on m and leads to a concept of homogeneity of order m . We also introduces complete forward (backward) monomials. On applying Buchberger's Algorithm for finding **gr1** Gröbner basis of some ideals, the above setting highly reduces the process toward new results. (Received September 13, 2014)