$$(n,k) = \begin{array}{cccc} (15,56) & (15,57) & (3,58) & (3,59) & (9,61) \\ ab_2 & AB_2 & ab_2^2 & AB_2^2 & AB_2 \\ & \bullet & \bullet & \bullet & \bullet \\ b_2 & B_2 & b_2^2 & B_2^2 & B_2^2 \end{array}$$