在一组样本数据中,1,2,3,4 出现的概率分别为 p_1,p_2,p_3,p_4 ,且 $\sum p_i = 1$,则下面四种情形中,对应样本的标准差最大的一组是 ()

$$A.p_1 = p_4 = 0.1, p_2 = p_3 = 0.4$$
 $B.p_1 = p_4 = 0.4, p_2 = p_3 = 0.1$

$$C.p_1 = p_4 = 0.2, p_2 = p_3 = 0.3$$
 $D.p_1 = p_4 = 0.3, p_2 = p_3 = 0.2$