procedure $SGA(f : \mathbb{X} \mapsto \mathbb{R}^+, ps, cr)$ \blacktriangleright for maximization! for $j \in 1 \dots ps$ do \triangleright random initial population randomly sample $S_0[j].x$ from $\mathbb{X}; \ S_0[j].y \leftarrow f(S_0[j].x);$