Алгоритм 3. | Input $\varepsilon, x_0, R: V(x_*, x_0) \le R^2, L_0 > 0$

1. $L_{k+1} := L_k/2$;

2. $x_{k+1} := \arg\min_{x \in Q} \{\langle \nabla f(x_k), x\rangle + L_{k+1} V(x, x_k)\}$

3. If $0 \le \langle \nabla f(x_k), x_{k+1} - x_k\rangle + L_{k+1} V(x_{k+1}, x_k) + \frac{\varepsilon}{2}$

Then $k := k+1$ and goto 1

Else $L_{k+1} := 2 * L_{k+1}$ ang goto 2

4. Stopping rule $\frac{R^2}{S_N} \le \frac{\varepsilon}{2} \left(S_N \ge \frac{2R^2}{\varepsilon}\right)$

5. Output $\hat{x} = \frac{1}{S_N} \sum_{k=0}^{N-1} \frac{x_k}{L_{k+1}}$, $S_N = \sum_{k=0}^{N-1} L_{k+1}^{-1}$

или $\min_{k \ge 0} f(x_k)$

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Алгоритм 4 | Input $x_0, R: V(x_*, x_0) \le R^2, L_0 > 0, \delta_0 > 0$

1. $L_{k+1} := L_k/2$, $\delta_{k+1} := \delta_k/2$;

2. $x_{k+1} := \arg\min_{x \in Q} \{\langle \nabla f(x_k), x\rangle + L_{k+1} V(x, x_k)\}$;

3. If $0 \le \langle \nabla f(x_k), x_{k+1} - x_k\rangle + L_{k+1} V(x_{k+1}, x_k) + \delta_{k+1}$

Then $k := k+1$ and goto 1

Else $L_{k+1} := 2 * L_{k+1}$, $\delta_{k+1} := 2 * \delta_{k+1}$ and goto 2

4. Output $\hat{x} = \frac{1}{S_N} \sum_{k=0}^{N-1} \frac{x_k}{L_{k+1}}$ или $\min_{k \ge 0} f(x_k)$

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$f(\hat{x}) - f(x_*) \le \frac{R^2}{\dots} + \frac{1}{S_N} \sum^{N-1} \frac{\delta_{k+1}}{\dots}$