

Bubble <div> <div>9536</div> <div>5936</div> <div>5396</div> <div>5369</div>① <div>3569</div>② <div>3569</div>③ </div>	<ul style="list-style-type: none"> • worst $O(n^2)$ • best $O(n)$ • $n-1$ max pass • sensitive 	Exchange <div> <div>9536</div> <div>5936</div> <div>3956</div>① <div>3596</div>② <div>3569</div>③ </div>	<ul style="list-style-type: none"> • $O(n^2)$ • $n-1$ max pass • not sensitive • swaps $[i]$ w/ next smallest 	Selection <div> <div>9536</div> <div>3596</div>① <div>3596</div>② <div>3569</div>③ </div>	<ul style="list-style-type: none"> • $O(n^2)$ • $n-1$ max pass • not sensitive • swaps $[i]$ w/ min value 	Insertion <div> <div>9536</div> <div>5936</div> <div>3596</div> <div>3569</div> </div>	<ul style="list-style-type: none"> • worst $O(n^2)$ • best $O(n)$ • $n-1$ max pass • sensitive • $[i]$ selects • $[j]$ inserts
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Shell <ul style="list-style-type: none"> • $O(n^{3/2})$ • pass=gap-decrement • not sensitive <div>for(k=1);k≤n/9;k=3*l+1){}</div> <div> <div>953617124810211</div> <div>123412341234</div> <div>918571031226411</div> <div>123123123123123</div> <div>152487369101211</div>① <div>123123123123123</div> <div>143105861227911</div> <div>123123123123123</div> <div>152367489101211</div>② <div>12121212121212</div> <div>126491253781011</div> <div>132547689101211</div>③ </div> <div>→ insertion sort</div>	Bucket <ul style="list-style-type: none"> • $O(n)$ • not sensitive <div>1915619711105</div> <div> <div>[0] 10</div> <div>[1] 111</div> <div>[5] 515</div> <div>[6] 6</div> <div>[7] 7</div> <div>[9] 919</div> </div> <div>-create sublists by digit</div> <div>-linear sort sublists & re-insert each in order</div> <div>1011151567919</div> ① <div>[0] 15679</div> <div>[1] 10111519</div> <div>1567910111519</div> ②	Merge <ul style="list-style-type: none"> • $O(n \log n)$ • not sensitive <div>*always left first</div> <div>1915619711105</div> <div>1915619711105</div> <div>1915619711105</div> <div>1915619711105</div> <div>151916479105</div> <div>1615196510115510</div> <div>16151975791011</div> <div>1567910111519</div> 8	<ul style="list-style-type: none"> *use ptrs *eval LCV once *inline swap
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