Les 1 huiswerk

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1 Opgave 1

a. Insertion sort:

$\{6, 0, 9, 3, 0, 5, 7, 3, 1, 5\}$

$\{0, 6, 9, 3, 0, 5, 7, 3, 1, 5\}$

$\{0, 6, 9, 3, 0, 5, 7, 3, 1, 5\}$

$\{0, 3, 6, 9, 0, 5, 7, 3, 1, 5\}$

$\{0, 0, 3, 6, 9, 5, 7, 3, 1, 5\}$

$\{0, 0, 3, 5, 6, 9, 7, 3, 1, 5\}$

$\{0, 0, 3, 5, 6, 7, 9, 3, 1, 5\}$

$\{0, 0, 3, 3, 5, 6, 7, 9, 1, 5\}$

$\{0, 0, 1, 3, 3, 5, 6, 7, 9, 5\}$

$\{0, 0, 1, 3, 3, 5, 5, 6, 7, 9\}$

b. Shell sort, increments $\{5, 3, 1\}$

6	0	9	3	0	5	7	3	1	5
5					6				
	0					7			
		3					9		
			1					3	
				0					5
5	0	3	1	0	6	7	9	3	5
1			5			5			7
	0			0			9		
		3			3			6	
1	0	3	5	0	3	5	9	6	7
0	0	1	3	3	5	5	6	7	9

c. Merge sort:

{6, 0, 9, 3, 0, 5, 7, 3, 1, 5}

{6, 0, 9, 3, 0} {5, 7, 3, 1, 5}

{6, 0} {9, 3, 0} {5, 7} {3, 1, 5}

{6} {0} {9} {3, 0} {5} {7} {3} {1, 5}

{6} {0} {9} {3} {0} {5} {7} {3} {1} {5}

{6} {0} {9} {0, 3} {5} {7} {3} {1, 5}

{0, 6} {0, 3, 9} {5, 7} {1, 3, 5}

{0, 0, 3, 6, 9} {1, 3, 5, 5, 7}

{0, 0, 1, 3, 3, 5, 5, 6, 7, 9}