

Shear sort (Row-column sort) (Snake sort)

9	6	9	4	>
2	7	6	5	<
9	3	6	2	>
5	4	1	5	<

Sort **even** lines in **ascending** order
Sort **odd** lines in **descending** order

Shear sort

9	6	9	4
2	7	6	5
9	3	6	2
5	4	1	5

> > > >

Sort columns in ascending order

Shear sort

9	6	9	4	>
2	7	6	5	<
9	3	6	2	>
5	4	1	5	<
>	>	>	>	

Repeat $\log_2 n$ times

Shear sort

9	6	9	4	>
2	7	6	5	<
9	3	6	2	>
5	4	1	5	<

This odd/even method is required in order to compare the largest element of row i with the smallest of row $i+1$. Otherwise some large elements would not go all the way down.

Shear sort

4	6	9	9	>
7	6	5	2	>
2	3	6	9	>
5	5	4	1	>

Shear sort

2	3	4	1
4	5	5	2
5	6	6	9
7	6	9	9

> > > >

Shear sort

1	2	3	4	>
5	5	4	2	>
5	6	6	9	>
9	9	7	6	>

Shear sort

1	2	3	2
5	5	4	4
5	6	6	6
9	9	7	9

> > > >

Shear sort

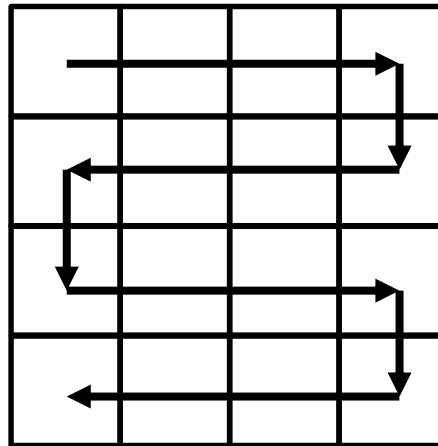
1	2	2	3	>
5	5	4	4	<
5	6	6	6	>
9	9	9	7	<

Shear sort

1	2	2	3
5	5	4	4
5	6	6	6
9	9	9	7

> > > >

Shear sort



The final sorted list is read in a snake like order.
Hence the alternative name (snake sort)

Shear sort

1	2	2	3
5	5	4	4
5	6	6	6
9	9	9	7

1	2	2	3	4	4	5	5	5	6	6	6	7	9	9	9
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