

$E(s^2)$ -optimal and minimax-optimal SSDs obtained by the Tabu Search algorithm

Tables 1-30 give the $E(s^2)$ -optimal and minimax-optimal SSDs obtained by the Tabu Search algorithm. These results were obtained using the algorithm described in the paper “A bit-parallel tabu search algorithm for constructing $E(s^2)$ -optimal and minimax-optimal supersaturated designs” by L.B. Morales and D.A. Bulutoglu.

Table 1: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 16$ and $m = 25$, $E(s^2) = 7.68000$

-1	1	-1	-1	-1	-1	1	-1	1	-1	1	1	-1	1	1	1	1	-1	-1	-1	-1	-1	1	
1	-1	1	-1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-1	1	-1	1	1	-1	1	-1	1	
-1	1	1	1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	-1	1	1	-1	1	1	1	
1	-1	1	-1	1	1	-1	1	1	1	1	-1	-1	1	1	-1	1	1	1	1	1	1	1	
-1	1	-1	1	-1	1	1	-1	1	1	-1	-1	1	-1	1	1	-1	-1	1	-1	1	-1	-1	
1	1	-1	1	-1	-1	-1	1	-1	1	1	-1	-1	-1	-1	1	1	-1	-1	1	1	1	-1	1
-1	1	-1	-1	-1	1	-1	1	-1	1	-1	1	1	-1	-1	1	-1	-1	-1	1	1	1	1	1
-1	-1	1	-1	-1	-1	1	1	1	1	1	1	1	-1	1	-1	-1	-1	-1	1	-1	1	-1	-1
1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	1	-1	1	1	-1	-1	-1	-1	1	1	1	1
-1	1	1	1	-1	1	1	1	-1	-1	1	1	1	1	-1	-1	1	1	1	1	1	-1	1	-1
1	-1	-1	1	1	-1	-1	1	1	1	1	1	1	1	-1	-1	-1	-1	1	-1	1	-1	1	1
1	-1	1	1	1	-1	-1	-1	-1	1	-1	1	1	1	1	1	1	-1	-1	-1	-1	1	-1	-1
-1	-1	-1	-1	1	1	-1	-1	1	-1	1	-1	-1	1	1	-1	-1	1	1	-1	1	-1	-1	-1
-1	-1	1	1	1	1	-1	1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	-1	1	-1	-1	-1
1	1	-1	-1	1	-1	1	1	1	-1	-1	-1	1	1	-1	1	-1	1	-1	1	1	1	1	-1
1	1	1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	1

Table 2: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 144$

16	-4	0	0	4	-4	0	0	-4	4	-4	0	0	0	-4	4	0	-4	0	4	0	0	0	4	4	
-4	16	-4	4	-4	0	4	0	0	-4	-4	0	0	0	-4	0	0	4	-4	0	0	0	4	0	4	
0	-4	16	4	4	0	4	-4	-4	0	0	4	0	-4	0	-4	0	4	0	0	0	4	-4	0	-4	
0	4	4	16	4	0	-4	0	-4	0	0	0	4	-4	-4	0	0	0	0	-4	4	-4	0	-4	0	
4	-4	4	4	16	0	-4	-4	4	-4	0	0	0	0	0	0	-4	4	-4	0	0	0	0	0	0	
-4	0	0	0	0	16	0	0	-4	-4	0	0	-4	-4	4	0	-4	0	4	4	0	-4	4	0	0	
0	4	4	-4	-4	0	16	-4	4	0	0	4	0	0	-4	0	-4	0	4	4	0	0	0	0	-4	
0	0	-4	0	-4	0	-4	16	-4	0	4	0	4	0	-4	0	-4	0	0	4	-4	4	0	4	0	
-4	0	-4	-4	4	-4	4	-4	16	0	4	0	4	0	4	0	-4	0	0	0	4	0	0	0	0	
4	-4	0	0	-4	-4	0	0	0	16	0	4	0	0	4	0	-4	-4	0	-4	4	4	4	0	0	
-4	-4	0	0	0	0	4	4	0	16	4	-4	0	-4	0	0	0	4	4	4	0	0	-4	0	0	
0	0	4	0	0	0	4	0	0	4	4	16	0	4	0	-4	-4	4	0	0	-4	-4	0	0	4	
0	0	0	4	0	-4	0	4	4	0	-4	0	16	0	4	0	0	0	0	0	-4	0	4	-4	0	
0	0	-4	-4	0	-4	0	0	0	0	0	4	0	16	-4	-4	4	4	0	-4	0	-4	4	4	-4	
-4	-4	0	-4	0	4	-4	-4	4	4	-4	0	4	-4	16	0	0	0	-4	0	0	0	4	0	0	
4	0	-4	0	0	0	0	0	0	0	-4	0	-4	0	16	0	4	4	0	-4	0	4	-4	0	0	
0	0	0	0	-4	-4	-4	-4	-4	-4	0	-4	0	4	0	0	16	0	0	0	4	-4	0	0	0	
-4	4	4	0	4	0	0	0	0	-4	0	4	0	4	0	4	0	16	0	-4	-4	4	4	4	0	
0	-4	0	0	-4	4	4	0	0	0	4	0	0	0	-4	4	0	0	16	-4	4	-4	-4	4	0	
4	0	0	-4	0	4	4	4	0	-4	4	0	0	-4	0	0	0	-4	-4	16	0	0	4	0	0	
0	0	0	4	0	0	0	-4	4	4	4	-4	0	0	0	-4	4	-4	4	0	16	0	4	4	0	
0	0	4	-4	0	-4	0	4	0	4	0	-4	-4	-4	0	0	-4	4	-4	0	0	16	0	4	0	
0	4	-4	0	0	4	0	0	0	4	0	0	0	4	4	4	0	4	-4	4	4	0	16	0	-4	
4	0	0	-4	0	0	0	4	0	0	-4	0	4	4	0	-4	0	4	4	0	4	4	0	16	4	
4	4	-4	0	0	0	-4	0	0	0	0	4	-4	-4	0	0	0	0	0	0	0	0	0	-4	4	16

Table 3: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 16$ and $m = 26$, $E(s^2) = 7.87692$

1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	1	1	-1	1	1	-1	-1	-1	-1	1	1	-1	
1	-1	1	1	-1	-1	1	-1	1	-1	1	1	1	-1	-1	-1	1	1	-1	1	1	1	-1	-1	1	-1
-1	1	1	1	1	1	-1	1	1	1	1	-1	1	1	-1	-1	1	-1	1	-1	-1	1	1	1	-1	
1	1	-1	1	1	1	-1	1	-1	1	-1	-1	1	-1	-1	1	-1	1	1	1	-1	-1	-1	1	1	
1	-1	1	-1	1	1	1	1	1	1	-1	-1	-1	-1	1	-1	1	1	-1	-1	-1	-1	-1	-1	-1	
-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-1	-1	1	-1	-1	1	1	1	-1	1	1	-1	-1	1	
-1	1	-1	-1	-1	-1	-1	1	1	1	1	-1	-1	-1	-1	1	1	-1	1	1	1	1	-1	1	1	
-1	1	1	1	1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	
1	-1	-1	1	1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	1	-1	-1	-1	1	1	1	1	1	
1	1	1	1	-1	-1	1	1	-1	1	1	1	1	1	1	1	1	1	1	-1	1	-1	1	1	-1	
-1	1	1	-1	-1	1	1	-1	1	1	-1	1	1	1	1	-1	-1	-1	1	-1	-1	1	-1	-1	1	
-1	-1	-1	1	1	-1	1	1	1	-1	-1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	1	1	-1	
-1	-1	-1	-1	1	1	-1	-1	1	-1	-1	1	1	1	1	1	1	1	1	1	-1	-1	1	-1	1	
1	1	1	-1	-1	1	1	-1	1	-1	-1	-1	1	1	1	-1	-1	-1	1	1	1	1	1	1	-1	
-1	-1	1	-1	-1	1	-1	1	-1	-1	1	-1	1	-1	1	-1	-1	-1	1	-1	1	-1	-1	1	1	
1	1	-1	-1	1	-1	-1	-1	-1	1	1	1	-1	1	1	-1	-1	1	1	-1	-1	1	-1	1	-1	

Table 4: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 160$

16	0	0	0	0	0	4	-4	-4	4	0	0	0	-4	4	4	0	4	-4	0	0	0	0	0	0	0	-4
0	16	4	0	0	0	-4	4	0	4	0	4	0	4	4	4	-4	-4	0	4	0	4	0	0	0	0	0
0	4	16	0	-4	4	4	4	4	0	4	0	4	4	0	0	0	0	-4	-4	0	0	0	-4	-4	-4	-4
0	0	0	16	4	-4	4	4	-4	0	0	4	0	0	-4	-4	0	4	-4	0	0	4	4	0	0	0	0
0	0	-4	4	16	4	-4	4	0	0	-4	4	0	-4	-4	4	-4	0	0	0	-4	-4	0	0	0	-4	-4
0	0	4	-4	4	16	0	0	4	4	-4	-4	4	0	0	0	-4	0	-4	0	0	0	0	0	0	-4	4
4	-4	4	4	-4	0	16	-4	4	0	0	0	0	0	0	0	-4	0	4	-4	0	4	4	0	0	0	0
-4	4	4	4	4	0	-4	16	0	4	4	0	-4	-4	0	0	0	0	0	-4	4	-4	0	0	-4	0	0
-4	0	4	-4	0	4	4	0	16	0	0	0	0	0	-4	0	-4	0	4	4	4	0	-4	4	4	-4	-4
4	4	0	0	0	4	0	4	0	16	0	-4	0	0	0	0	0	4	0	-4	-4	0	-4	4	4	4	4
0	0	4	0	-4	-4	0	4	0	0	16	-4	4	-4	-4	0	0	4	4	4	0	-4	4	-4	0	0	0
0	4	0	4	4	-4	0	0	0	-4	-4	16	4	0	4	0	0	0	4	0	4	0	-4	-4	0	0	0
0	0	4	0	0	4	0	-4	0	0	4	4	16	0	0	0	4	0	0	0	0	-4	4	0	4	4	4
-4	4	4	0	-4	0	0	-4	0	0	-4	0	0	16	0	0	0	4	0	0	-4	0	0	4	-4	0	0
4	4	0	-4	-4	0	0	0	-4	0	-4	4	0	0	16	-4	-4	-4	0	-4	4	-4	4	0	0	0	0
4	4	0	-4	4	0	0	0	0	0	0	0	0	0	-4	16	4	-4	4	0	0	0	0	4	-4	0	0
0	-4	0	0	-4	-4	-4	0	-4	0	0	0	4	0	-4	4	16	0	-4	-4	4	0	-4	4	0	4	4
4	-4	0	4	0	0	0	0	0	4	4	0	0	4	-4	-4	0	16	0	4	0	-4	-4	0	-4	0	0
-4	0	-4	-4	0	-4	4	0	4	0	4	4	0	0	0	4	-4	0	16	0	0	-4	0	0	0	4	4
0	4	-4	0	0	0	-4	-4	4	-4	4	0	0	0	-4	0	-4	4	0	16	4	4	0	0	0	0	0
0	0	0	0	-4	0	0	4	4	-4	0	4	0	-4	4	0	4	0	0	4	16	0	0	4	-4	4	4
0	4	0	4	-4	0	4	-4	0	0	-4	0	-4	0	-4	0	0	-4	-4	4	0	16	-4	-4	0	4	4
0	0	0	4	0	0	4	0	-4	-4	4	-4	4	0	4	0	-4	-4	0	0	0	-4	16	4	0	0	0
0	0	-4	0	0	0	0	0	4	4	-4	-4	0	4	0	4	4	0	0	0	4	-4	4	16	4	0	0
0	0	-4	0	0	-4	0	-4	4	4	0	0	4	-4	0	-4	0	-4	0	0	-4	0	0	4	16	-4	-4
-4	0	-4	0	-4	4	0	0	-4	4	0	0	4	0	0	4	0	4	0	4	4	0	0	-4	16	4	0

Table 5: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 16$ and $m = 27$,
 $E(s^2) = 8.38746$

-1	-1	-1	1	-1	1	-1	1	1	1	-1	-1	1	-1	-1	1	1	-1	-1	1	-1	-1	1	-1	-1	
-1	1	1	-1	1	-1	-1	1	-1	-1	-1	1	-1	-1	1	1	-1	1	1	-1	1	-1	1	1	1	-1
1	1	-1	1	1	1	1	-1	-1	1	1	1	-1	1	-1	-1	1	1	-1	1	1	-1	-1	1	-1	
-1	-1	-1	-1	1	-1	1	1	1	1	1	-1	1	-1	1	1	1	1	-1	1	1	-1	-1	-1	1	-1
-1	-1	-1	-1	-1	1	1	-1	-1	-1	-1	1	1	1	1	-1	-1	1	-1	-1	-1	-1	1	1	1	-1
-1	1	-1	-1	-1	-1	1	1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	1
-1	1	1	1	1	1	-1	1	-1	-1	1	-1	1	-1	-1	1	1	1	-1	-1	-1	-1	-1	-1	-1	1
1	-1	1	1	-1	-1	-1	1	-1	1	-1	-1	1	1	1	-1	1	-1	1	1	1	-1	1	-1	-1	-1
1	-1	1	-1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	1
1	-1	1	-1	1	1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	1	1	-1	1	1	-1	1	-1	-1
1	1	-1	1	-1	1	-1	1	1	-1	-1	1	1	1	1	-1	1	-1	1	1	1	1	1	1	-1	1
1	1	-1	-1	-1	-1	1	1	1	-1	1	-1	1	1	-1	1	1	1	-1	1	1	1	1	1	-1	1
1	1	1	1	-1	1	1	-1	1	1	1	1	1	-1	-1	1	1	-1	-1	1	-1	-1	1	-1	-1	-1
1	1	1	-1	-1	1	-1	-1	-1	1	1	-1	1	1	1	-1	-1	1	-1	-1	1	1	1	1	1	1
-1	-1	-1	1	1	-1	-1	-1	1	-1	1	-1	-1	1	-1	-1	-1	-1	1	1	-1	-1	1	1	1	1
-1	-1	1	1	1	-1	1	-1	-1	1	1	1	1	1	-1	1	1	1	-1	1	1	1	-1	1	1	1

Table 6: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 184$

16	4	4	0	-4	4	0	-4	4	0	0	0	-4	4	0	4	0	0	0	4	4	4	-4	0	0				
4	16	0	0	-4	4	0	4	-4	0	4	4	0	-4	-4	0	0	0	4	0	-4	4	0	0	0	4			
4	0	16	0	4	0	-4	-4	-4	0	0	0	-4	-4	4	4	0	0	4	4	0	-4	-4	4	0	-4	0		
0	0	0	16	0	4	-4	0	0	4	4	0	0	4	4	-4	0	-4	0	4	0	4	0	-4	0	-4	0		
-4	-4	4	0	16	-4	0	-4	0	-4	4	0	-4	0	0	-4	4	0	4	4	0	0	0	-4	-4	4	0		
4	4	0	4	-4	16	0	-4	0	0	0	0	4	-4	0	-4	0	0	0	0	-4	-4	0	0	0	4	-4		
0	0	-4	-4	0	0	16	-4	0	4	4	4	0	0	0	-4	-4	0	4	0	0	0	4	0	0	0	-4		
-4	4	-4	0	-4	-4	-4	16	0	0	-4	-4	4	-4	0	4	0	0	4	4	0	4	0	0	-4	-4	0		
4	-4	-4	0	0	0	0	0	16	-4	0	-4	0	0	0	4	0	-4	4	-4	0	4	4	-4	0	0	0		
0	0	0	4	-4	0	4	0	-4	16	4	0	0	-4	0	4	4	0	-4	0	4	0	0	-4	0	-4	-4		
0	4	0	4	4	0	4	-4	0	4	16	-4	4	0	0	0	0	4	4	0	0	4	-4	-4	4	0	4		
0	4	0	0	0	0	4	-4	-4	0	-4	16	-4	4	4	-4	4	-4	0	-4	-4	0	4	0	0	0	0		
-4	0	-4	0	-4	4	0	4	0	0	4	-4	16	0	4	0	4	4	4	0	0	-4	0	4	4	0	4		
4	-4	-4	4	0	-4	0	-4	0	-4	0	4	0	16	4	-4	0	4	-4	0	0	4	4	4	0	0	4		
0	-4	4	4	0	0	0	0	0	0	0	4	4	4	16	0	0	4	4	-4	0	0	-4	0	-4	-4	0		
4	0	4	-4	-4	-4	-4	4	4	4	0	-4	0	-4	0	16	4	4	0	0	-4	4	-4	0	4	-4	-4		
0	0	0	0	4	0	-4	0	0	4	0	4	4	0	0	4	16	0	0	0	0	0	4	0	0	4	0		
4	0	0	-4	0	0	0	0	-4	0	4	-4	4	4	4	0	16	-4	0	-4	0	-4	0	-4	0	-4	0	0	
0	4	4	0	4	0	4	4	4	-4	4	0	4	-4	4	0	0	-4	16	4	0	4	0	4	0	0	0		
0	0	4	4	4	0	0	4	-4	0	0	-4	0	0	-4	0	0	0	4	16	-4	0	4	4	0	-4	-4		
0	-4	0	0	0	-4	0	0	0	4	0	-4	0	0	0	-4	0	-4	0	-4	16	0	0	4	-4	4	4		
4	4	-4	4	0	-4	0	4	4	0	4	0	-4	4	0	4	0	0	4	0	0	16	-4	0	0	4	-4		
4	0	-4	0	0	0	4	0	4	0	-4	4	0	4	-4	-4	4	-4	0	4	0	-4	16	0	-4	-4	4		
4	0	4	-4	-4	0	0	0	-4	-4	-4	0	4	4	0	0	0	0	4	4	4	0	0	16	4	4	0		
-4	0	0	0	-4	0	0	-4	0	0	4	0	4	0	-4	4	0	-4	0	0	-4	0	-4	0	-4	4	16	0	0
0	0	-4	-4	4	4	0	-4	0	-4	0	0	0	0	-4	-4	4	0	0	-4	4	4	-4	4	0	16	-4		
0	4	0	0	0	-4	-4	0	0	-4	4	0	4	4	0	-4	0	0	0	-4	4	-4	4	0	0	-4	16		

Table 7: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 23$, $E(s^2) = 6.15020$

-1	1	1	-1	1	-1	-1	1	-1	1	-1	-1	1	1	1	1	-1	1	1	1	1	-1
-1	-1	-1	-1	1	-1	1	-1	1	1	-1	1	-1	1	-1	1	1	-1	-1	-1	1	
1	-1	1	-1	-1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	1	-1	1	-1	-1	
-1	1	-1	-1	-1	-1	1	-1	1	1	1	1	1	-1	1	-1	1	-1	1	1	1	1
1	-1	1	1	1	1	-1	1	1	1	1	1	1	-1	-1	1	-1	-1	-1	1	1	-1
-1	-1	-1	1	1	1	1	1	-1	-1	-1	-1	1	1	1	-1	-1	-1	-1	-1	1	-1
-1	1	-1	1	-1	-1	-1	1	-1	1	1	1	-1	1	-1	1	1	-1	-1	-1	1	-1
-1	1	1	1	-1	1	-1	-1	1	-1	-1	1	1	1	1	-1	1	1	-1	-1	-1	-1
1	1	-1	1	1	-1	1	-1	1	-1	-1	-1	-1	1	1	1	1	-1	1	1	-1	-1
1	1	1	-1	1	1	1	1	-1	1	1	1	-1	-1	1	1	1	1	-1	-1	-1	1
1	1	1	-1	1	-1	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	1
1	1	1	1	-1	-1	1	1	1	-1	1	-1	1	1	-1	1	-1	-1	1	-1	-1	1
1	-1	-1	1	-1	-1	-1	-1	-1	1	1	-1	1	-1	1	-1	-1	1	-1	-1	-1	1
1	-1	-1	1	1	1	-1	-1	-1	1	1	1	1	-1	1	1	1	1	1	1	1	1
-1	-1	1	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1	1	-1	-1	1	1	1
1	-1	-1	-1	-1	1	-1	1	1	-1	-1	1	-1	1	1	1	-1	-1	1	-1	1	-1
-1	-1	1	1	1	1	1	-1	1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-1
-1	1	-1	-1	-1	1	1	1	-1	-1	1	-1	-1	-1	-1	1	1	1	-1	-1	-1	-1

Table 8: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 17$

18	-2	2	2	2	2	-2	-2	-2	-2	2	2	2	-6	2	6	-2	-2	-2	2	-2	2	2
-2	18	2	-2	-2	-6	2	2	-2	-2	2	2	2	-2	2	2	2	2	2	2	-2	-2	-2
2	2	18	-2	2	2	-2	2	2	2	-2	-2	2	-2	-2	-2	2	-2	2	-2	-2	2	2
2	-2	-2	18	2	2	-2	-2	2	-2	6	-2	2	6	2	-2	2	-2	-2	2	-2	-2	-2
2	-2	2	2	18	2	2	-2	-2	2	-2	2	-2	2	2	2	-2	2	-2	6	2	-2	6
2	-6	2	2	2	18	2	2	-2	-2	2	2	-2	2	2	-2	2	-2	2	2	-2	-2	-2
-2	2	-2	-2	2	2	18	-2	2	2	2	-6	-2	-2	-2	2	2	-2	2	-2	-2	-2	2
-2	2	2	-2	-2	2	-2	18	-2	-2	2	-2	-6	2	2	2	-6	-2	-2	-2	2	2	2
-2	-2	2	2	-2	-2	2	-2	18	-2	-2	2	-6	2	2	-2	2	-2	2	2	-2	2	2
-2	-2	2	-2	2	-2	2	-2	-2	18	6	2	-2	-2	2	2	2	-2	2	-2	2	2	-2
2	2	-2	6	-2	2	2	2	-2	6	18	2	-2	-2	-2	-2	2	-2	2	2	-2	6	2
2	2	-2	-2	2	2	-6	-2	2	2	2	18	-2	2	2	2	2	-2	2	2	-2	-2	6
2	2	2	2	-2	-2	-2	-6	-6	-2	-2	-2	18	2	2	-2	-2	-2	6	-2	2	2	2
-6	-2	-2	6	2	2	-2	2	2	-2	-2	2	2	18	-2	6	-2	-2	2	-2	-2	2	-2
2	2	-2	2	2	2	-2	2	2	2	-2	2	2	-2	18	-2	-2	2	-2	2	2	2	-2
6	2	-2	-2	2	-2	2	2	-2	2	-2	2	-2	6	-2	18	2	2	2	-2	2	2	-2
-2	2	2	2	-2	2	2	-6	2	2	2	2	-2	-2	-2	2	18	2	-2	-2	6	2	-2
-2	2	-2	-2	2	-2	-2	-2	-2	-2	-2	-2	-2	-2	2	2	2	18	2	-2	-2	2	-2
-2	2	2	-2	-2	2	2	-2	2	2	2	2	6	2	-2	2	-2	2	18	2	2	-2	2
2	2	-2	-2	6	2	-2	-2	2	-2	2	2	-2	-2	2	-2	-2	2	18	2	2	-2	-2
-2	-2	-2	2	2	-2	-2	2	-2	2	-2	-2	2	-2	2	2	6	-2	2	2	18	-2	2
2	-2	2	-2	-2	-2	-2	2	2	2	6	-2	2	2	2	2	2	2	-2	2	-2	18	2
2	-2	2	-2	6	-2	2	2	2	-2	2	6	2	-2	-2	-2	-2	2	-2	2	2	18	2

Table 9: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 24$, $E(s^2) = 6.66667$

1	-1	1	1	-1	1	-1	-1	1	1	-1	-1	-1	1	1	1	1	-1	-1	-1	1	-1	1	
-1	-1	-1	-1	-1	-1	-1	1	1	1	1	1	1	-1	1	1	-1	-1	1	1	-1	-1	-1	1
1	-1	1	-1	-1	1	1	1	-1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	-1	-1	1	-1
-1	1	1	1	1	1	-1	-1	-1	1	1	-1	-1	-1	1	-1	-1	1	1	1	1	-1	-1	-1
-1	1	1	1	1	-1	-1	1	-1	1	-1	-1	1	1	-1	1	-1	1	-1	1	1	1	1	1
-1	1	-1	-1	-1	-1	1	1	-1	1	1	1	1	1	1	1	-1	-1	1	1	-1	-1	1	-1
1	1	1	-1	1	-1	1	-1	1	1	-1	1	1	-1	-1	1	1	-1	1	1	1	1	-1	-1
1	-1	-1	1	1	-1	1	1	1	-1	1	-1	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1
-1	-1	-1	-1	1	1	1	-1	1	1	1	1	-1	1	-1	-1	1	1	1	1	-1	1	1	1
1	-1	1	-1	1	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	1	-1	-1	1	1	1	1	1
1	1	1	-1	-1	1	-1	1	-1	-1	1	-1	1	1	1	-1	1	-1	1	1	-1	1	1	-1
1	1	-1	1	1	1	1	-1	-1	-1	-1	1	-1	1	1	1	-1	-1	-1	1	-1	-1	-1	1
1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	1	-1	-1	-1	-1	1	1	-1	1	-1	-1
-1	1	-1	-1	1	1	-1	1	1	-1	1	-1	-1	-1	1	1	-1	-1	-1	1	-1	1	1	1
-1	1	-1	1	-1	-1	1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	1	-1	-1	1	1	-1	-1
1	1	-1	1	-1	1	-1	1	1	-1	-1	1	1	1	-1	-1	1	1	-1	1	1	-1	1	1
-1	-1	1	1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	1	1	-1	1	-1	1	-1	-1	1
-1	-1	1	1	1	1	1	1	1	1	-1	1	1	1	1	-1	1	-1	-1	-1	1	-1	1	-1

Table 10: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 23$

18	-2	2	-2	-2	2	-2	-2	-2	-6	-6	2	2	-2	-2	-2	2	-2	2	-2	2	-2	-2	
-2	18	-2	2	2	2	-2	2	-2	-2	-2	-2	-2	2	2	2	-2	-2	2	2	2	6	-2	-2
2	-2	18	2	2	2	-2	-2	-6	2	-2	-2	6	-2	2	2	2	2	-2	2	2	2	2	-2
-2	2	2	18	2	2	2	-2	2	-2	-6	-6	2	2	2	-2	-2	2	-2	-2	-2	-2	-6	2
-2	2	2	2	18	2	2	-2	2	2	2	2	2	-2	-2	-2	2	2	-6	6	2	-2	2	2
2	2	2	2	2	18	-2	2	2	-2	-2	2	-6	2	2	-2	2	2	2	-2	-2	-2	2	2
-2	-2	-2	2	2	-2	18	-2	2	-2	-2	6	-2	2	-2	2	6	-2	2	-2	-2	-2	-2	-6
-2	2	-2	-2	-2	2	-2	18	2	-2	2	2	6	2	-2	2	2	2	-2	-2	-2	-2	2	-2
-2	-2	-6	2	2	2	2	2	18	2	-2	2	2	-6	-2	-2	6	-2	2	-2	-2	2	-2	2
-6	-2	2	-2	2	-2	-2	-2	2	18	-2	2	-2	2	2	2	2	2	-2	6	2	2	-2	-2
-6	-2	-2	-6	2	-2	-2	2	-2	-2	18	-2	2	-2	2	-2	6	2	2	2	2	-2	-2	2
2	-2	-2	-6	2	2	6	2	2	2	-2	18	2	2	2	-2	2	2	-2	2	2	2	-2	2
2	-2	6	2	2	-6	-2	6	2	-2	2	2	18	2	-2	-2	2	-2	2	2	2	2	-2	2
-2	2	-2	2	-2	2	2	2	-6	2	-2	2	2	18	-2	-2	2	-2	-2	2	2	2	2	2
-2	2	2	2	-2	2	-2	-2	-2	2	2	2	-2	-2	18	-2	-2	-2	-2	-2	-2	2	-2	-2
-2	2	2	-2	-2	-2	2	2	-2	2	-2	2	-2	-2	-2	18	2	-2	-2	-2	-2	-2	-6	6
-2	-2	2	-2	2	2	6	2	6	2	6	-2	2	2	-2	2	18	-2	-2	-2	2	2	-2	-2
2	-2	2	2	2	2	-2	2	-2	2	2	2	-2	-2	-2	-2	-2	18	-2	-2	-2	6	-2	2
-2	2	2	-2	-6	2	2	-2	2	-2	2	2	2	-2	-2	-2	-2	-2	18	2	-2	2	-2	-2
2	2	-2	-2	6	-2	-2	-2	-2	6	2	-2	2	2	-2	-2	-2	-2	2	18	-6	-2	-2	-2
-2	2	2	-2	2	-2	-2	-2	-2	2	2	2	2	2	-2	-2	2	-2	-2	-6	18	-2	-2	-2
2	6	2	-2	-2	-2	-2	-2	2	2	-2	2	2	2	2	-2	2	6	2	-2	-2	18	2	2
-2	-2	2	-6	2	2	-2	2	-2	-2	-2	-2	2	-2	-6	-2	-2	-2	-2	-2	2	18	-2	-2
-2	-2	-2	2	2	2	-6	-2	2	-2	2	2	2	2	-2	6	-2	2	-2	-2	-2	2	-2	18

Table 11: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 25$,
 $E(s^2) = 7.20000$

1	1	-1	1	1	-1	-1	-1	1	1	1	-1	1	1	-1	-1	1	-1	-1	-1	1	-1	-1	-1
1	-1	1	1	-1	1	1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	1	1	1	-1	1	
1	-1	-1	1	-1	1	-1	1	-1	-1	1	1	1	1	1	1	1	1	1	1	-1	1	1	
1	-1	1	1	-1	-1	1	1	1	1	1	1	-1	1	-1	-1	1	1	-1	-1	-1	1	1	1
1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	-1	-1	1	1	1	1	1	-1
1	1	1	-1	-1	1	-1	1	1	1	-1	1	1	-1	-1	1	-1	1	-1	1	1	-1	-1	
-1	-1	-1	1	1	1	-1	1	1	-1	1	1	1	-1	1	1	1	-1	1	-1	1	-1	-1	
-1	1	1	-1	-1	1	-1	1	1	-1	-1	-1	1	-1	-1	-1	1	-1	-1	-1	-1	1	-1	
-1	1	-1	1	1	1	1	-1	1	1	-1	1	-1	-1	1	-1	1	1	-1	1	1	1	1	
-1	-1	1	-1	1	1	1	-1	1	1	-1	-1	-1	1	-1	-1	1	1	1	1	-1	-1	-1	-1
-1	1	-1	1	-1	-1	1	-1	-1	1	1	1	-1	-1	1	1	-1	1	1	-1	-1	-1	-1	
-1	-1	-1	-1	-1	-1	1	-1	1	-1	1	1	1	1	-1	1	1	-1	-1	1	1	1	1	-1
-1	1	1	1	1	-1	-1	1	1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	1	1	-1	1	1
-1	1	1	-1	-1	-1	1	1	-1	-1	1	1	1	1	-1	-1	1	1	1	1	1	-1	-1	1
1	1	-1	1	1	1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	1	-1	-1	1	-1	1	
-1	-1	1	-1	1	-1	-1	-1	1	1	-1	1	-1	-1	1	1	-1	-1	1	1	-1	1	1	1
1	1	1	-1	1	1	1	-1	-1	-1	1	1	1	1	1	1	1	-1	-1	-1	-1	-1	1	-1
1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	1

Table 12: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 30$

18	-2	-2	2	-2	2	-2	2	-2	-2	-6	2	2	6	-2	2	2	-2	-6	-2	-6	2	2	-2	2
-2	18	2	2	2	2	2	2	-2	2	2	2	2	-2	-2	-2	2	-2	-2	2	-6	2	-6	-2	-2
-2	2	18	-6	-2	2	2	2	-2	2	-2	-2	2	-2	-6	-2	-2	2	-6	-2	2	-2	-2	2	2
2	2	-6	18	2	2	2	2	2	2	2	-2	-2	-2	2	-2	2	2	-2	-2	2	2	2	-2	6
-2	2	-2	2	18	2	-2	-2	2	-2	-2	-2	2	-2	-2	2	-2	-2	2	2	-2	2	2	-2	-2
2	2	2	2	2	18	2	2	-2	2	-6	-2	2	-2	6	-2	-2	2	6	2	-2	-2	2	-2	-2
-2	2	2	2	-2	2	18	-6	-2	-2	2	2	-2	6	2	-2	-2	2	2	2	-2	-2	2	-2	2
2	2	2	2	-2	2	-6	18	-2	-2	2	2	-2	2	-2	-2	-2	2	2	2	2	2	2	2	2
-2	-2	-2	2	2	-2	-2	-2	18	2	-2	2	-2	-2	-6	-2	2	6	2	-6	-6	2	2	-2	-2
-2	2	2	2	-2	2	-2	-2	2	18	2	-2	-2	-2	-2	-2	2	2	-2	6	-2	-2	-2	2	-2
-6	2	-2	2	-2	-6	2	2	-2	2	18	-2	2	2	-2	-2	2	-2	2	-2	-2	-6	2	-2	-2
2	2	-2	-2	-2	-2	2	2	2	-2	-2	18	-2	-2	2	-2	6	2	-2	2	-2	-2	2	-2	-2
2	-2	2	-2	-2	2	-2	-2	-2	-2	2	-2	18	2	2	2	6	2	-2	-2	2	6	2	-2	-2
6	-2	-2	-2	2	-2	6	2	-2	-2	2	-2	2	18	-2	-2	2	2	2	2	-2	2	-2	2	-2
-2	-2	-6	2	-2	6	2	-2	-6	-2	-2	2	2	-2	18	-2	-2	2	2	-2	2	2	2	6	-6
2	2	-2	-2	-2	-2	-2	-2	-2	-2	-2	2	-2	-2	18	-2	6	-2	2	-2	-2	-2	2	2	2
2	-2	-2	2	2	-2	-2	-2	2	2	2	6	6	2	-2	-2	18	-2	2	-2	-2	-2	-2	2	6
-2	-2	2	2	-2	2	2	2	6	2	-2	2	2	2	2	6	-2	18	-2	-2	2	-2	-2	2	-6
-6	-2	-6	-2	-2	6	2	2	2	-2	2	-2	-2	2	2	-2	2	-2	18	2	-2	-2	-2	-2	2
-2	2	-2	-2	2	2	2	2	-6	6	-2	2	-2	2	-2	2	-2	-2	2	18	6	2	2	-2	2
-6	-6	2	2	2	-2	-2	2	-6	-2	-2	-2	2	-2	2	-2	-2	2	-2	6	18	2	-2	-2	2
2	2	-2	2	-2	-2	-2	2	2	-2	-6	-2	6	2	2	-2	-2	-2	2	2	18	2	2	2	2
2	-6	-2	2	2	2	2	2	-2	2	2	2	-2	2	-2	-2	-2	-2	2	-2	2	18	2	2	
-2	-2	2	-2	2	-2	-2	2	-2	2	-2	-2	2	6	2	2	2	-2	-2	-2	2	2	18	2	2
2	-2	2	6	-2	-2	2	2	-2	-2	-2	-2	-2	-6	2	6	-6	2	2	2	2	2	2	2	18

Table 13: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 26$, $E(s^2) = 7.64308$

1	1	-1	-1	1	-1	-1	-1	-1	-1	1	1	-1	1	1	1	1	-1	1	-1	-1	-1	-1	-1	
-1	-1	1	1	1	1	1	1	-1	-1	-1	1	1	-1	1	1	-1	1	1	-1	-1	1	1	-1	-1
-1	1	-1	1	1	1	-1	-1	1	1	1	1	-1	-1	-1	1	1	-1	-1	1	1	1	-1	1	1
1	1	1	-1	1	1	-1	1	-1	1	-1	-1	-1	1	-1	-1	1	-1	-1	1	1	-1	1	-1	1
1	1	-1	1	-1	-1	1	1	-1	1	1	1	1	1	1	-1	1	-1	1	1	1	1	1	1	-1
-1	1	-1	1	1	1	-1	1	1	-1	1	-1	-1	-1	1	1	-1	-1	1	1	1	-1	-1	1	-1
1	-1	1	-1	-1	1	1	-1	1	1	1	-1	1	-1	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1
-1	1	-1	-1	-1	-1	1	1	1	-1	-1	-1	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	1	-1
1	-1	-1	1	-1	-1	-1	-1	1	-1	1	1	-1	-1	-1	1	1	-1	-1	-1	1	1	-1	1	1
-1	1	1	-1	1	-1	1	1	1	-1	1	1	1	1	1	-1	1	-1	-1	-1	-1	-1	1	1	1
1	-1	1	1	1	-1	1	1	-1	1	1	-1	-1	-1	1	-1	1	1	1	-1	-1	-1	1	1	1
-1	-1	1	-1	-1	-1	1	1	1	-1	1	-1	1	-1	-1	1	-1	1	-1	1	-1	1	-1	1	-1
-1	-1	1	1	1	-1	-1	-1	1	1	-1	-1	1	1	1	1	1	-1	1	-1	1	-1	1	1	-1
1	-1	-1	1	-1	1	-1	-1	-1	-1	1	-1	1	1	-1	-1	-1	1	-1	-1	-1	-1	1	1	1
1	1	1	1	-1	-1	1	-1	1	-1	-1	-1	1	1	-1	-1	1	1	1	1	1	1	1	1	-1
-1	1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1	1	1	1	1	1	-1	-1	1	-1	-1	1
-1	-1	-1	-1	-1	1	-1	1	-1	1	1	-1	-1	-1	1	-1	-1	1	-1	-1	1	1	1	-1	-1
1	-1	-1	-1	1	1	1	-1	-1	-1	1	-1	-1	1	1	-1	1	-1	-1	1	1	1	1	1	-1

Table 14: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 37$

18	-2	-2	2	-2	-2	2	-6	-6	-2	2	-2	2	2	-2	-2	-2	-2	-2	6	2	-2	2	-2	2	
-2	18	-2	-2	2	-2	2	2	2	-2	2	2	-6	-2	2	2	2	6	-2	2	6	2	-2	2	-2	2
-2	-2	18	-2	2	-2	6	2	2	6	-2	-2	2	2	2	2	-2	-2	-2	2	2	-2	-2	-2	6	
2	-2	-2	18	2	-2	-2	2	-2	2	2	2	-2	2	2	-2	2	-2	6	2	2	2	2	2	6	
-2	2	2	2	18	2	-2	2	-2	-2	2	-2	2	-2	2	2	6	2	2	-6	2	2	-6	2	2	2
-2	-2	-2	-2	2	18	-2	-2	-6	2	2	-2	-6	-2	2	-2	-2	-2	-2	-2	2	2	-2	-6	2	
2	2	6	-2	-2	-2	18	2	-2	-2	6	-2	2	-2	2	2	2	-2	2	2	-2	6	2	-2	2	2
-6	2	2	-2	2	-2	2	18	-2	2	-2	2	2	-2	-2	-2	-6	-2	2	2	2	-2	-2	2	2	-2
-6	2	2	2	-2	-6	-2	-2	18	-2	2	-2	-2	-2	-2	-2	-2	-2	-2	2	2	-2	2	2	-2	-2
-2	-2	6	-2	-2	2	-2	2	-2	18	2	-2	2	2	-2	-2	2	2	-6	2	6	2	2	-2	2	-2
2	2	-2	2	2	2	6	-2	2	2	18	-6	2	2	2	-2	2	-2	2	-2	2	-2	2	2	2	2
-2	2	-2	2	-2	-2	-2	2	-2	-2	-6	18	2	-2	2	2	2	-2	-6	-2	2	-2	6	-2	2	2
2	-6	2	2	2	-6	2	2	-2	2	2	2	18	-2	6	-2	2	2	-2	-2	-2	-2	-2	2	-2	-2
2	-2	2	-2	-2	-2	-2	-2	-2	2	2	-2	-2	18	2	2	-2	2	-2	-2	-6	-2	2	6	6	2
-2	2	2	2	2	2	2	-2	-2	-2	2	2	6	2	18	6	-2	2	-2	2	-2	-2	-6	-2	-2	-2
-2	2	2	2	2	-2	2	-2	-2	-2	-2	2	-2	2	6	18	2	2	6	2	2	2	6	2	-2	-6
-2	2	2	-2	6	-2	2	-6	-2	2	2	2	2	-2	-2	2	18	-2	-2	2	-2	-2	2	2	2	2
-2	6	-2	2	2	-2	-2	-2	2	-2	-2	2	2	2	2	2	-2	18	2	-2	-2	6	2	-2	-2	2
-2	-2	-2	-2	2	-2	2	2	-2	-6	2	-6	-2	-2	-2	6	-2	2	18	-2	-2	-6	2	-6	-2	-2
-2	2	-2	6	-6	-2	2	2	-2	2	-2	-2	-2	2	2	2	-2	-2	18	-2	-2	-2	2	2	2	-2
6	6	2	2	2	-2	-2	2	2	6	2	2	-2	-6	-2	2	-2	-2	-2	18	2	-2	-2	-2	-2	-2
2	2	2	2	2	2	6	-2	2	2	-2	-2	-2	-2	-2	2	-2	6	-6	-2	2	18	2	2	2	-2
-2	-2	-2	2	-6	2	2	-2	-2	2	2	6	-2	2	-6	6	2	2	2	-2	-2	2	18	2	-2	2
2	2	-2	2	2	-2	-2	2	2	-2	2	-2	2	6	-2	2	2	-2	-6	2	-2	2	2	18	-2	-2
-2	-2	-2	2	2	-6	2	2	2	2	2	2	-2	6	-2	-2	2	-2	-2	2	-2	2	-2	-2	18	-2
2	2	6	6	2	2	2	-2	-2	-2	2	2	-2	2	-2	-6	2	2	-2	-2	-2	-2	-2	-2	18	-2

Table 15: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 27$,
 $E(s^2) = 8.10256$

1	-1	-1	-1	1	-1	1	1	1	-1	-1	1	1	1	-1	1	1	-1	1	-1	-1	1	-1		
1	1	1	-1	1	-1	1	-1	-1	1	1	1	-1	-1	1	1	-1	-1	-1	1	1	-1	-1	1	-1
-1	1	-1	1	-1	1	1	-1	-1	-1	-1	1	1	1	1	1	1	1	-1	-1	1	1	-1	1	-1
-1	-1	1	1	1	1	-1	-1	-1	1	-1	1	1	-1	1	1	1	1	-1	-1	1	-1	1	1	1
-1	1	1	-1	-1	-1	-1	-1	-1	-1	1	1	1	-1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1
-1	-1	1	-1	1	1	1	-1	-1	1	-1	1	1	-1	-1	-1	1	-1	1	1	1	-1	-1	-1	1
1	-1	-1	-1	-1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1	1	-1	1	-1	-1	1	-1	1	-1
1	-1	1	-1	-1	1	-1	1	1	-1	1	1	-1	1	1	1	-1	1	1	-1	1	1	1	1	-1
1	-1	-1	-1	1	-1	-1	1	-1	1	-1	1	-1	1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	1
1	1	-1	-1	-1	1	1	-1	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	1	1	1	1	1	1
1	-1	-1	1	-1	-1	1	-1	1	1	1	-1	1	1	1	-1	1	-1	-1	1	1	-1	1	1	1
-1	1	-1	1	1	1	-1	1	1	-1	1	-1	-1	1	-1	1	1	-1	-1	-1	1	1	-1	-1	-1
1	1	-1	1	1	-1	1	1	-1	1	-1	-1	-1	1	1	1	-1	1	1	-1	1	1	-1	-1	-1
-1	1	1	1	1	1	1	-1	1	-1	-1	-1	-1	1	-1	1	-1	-1	1	-1	-1	-1	1	1	-1
-1	1	1	-1	-1	-1	1	1	1	1	-1	1	-1	1	1	-1	-1	1	1	-1	1	-1	-1	1	1
-1	-1	-1	1	1	-1	-1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1	-1	1	1	1	1	1
-1	-1	1	1	-1	-1	-1	1	1	1	-1	-1	1	1	1	1	-1	-1	-1	1	1	1	-1	1	1
1	1	1	1	-1	1	-1	-1	1	1	1	-1	-1	-1	1	1	-1	1	1	1	1	1	-1	-1	1

Table 16: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 45$

18	-2	-6	-6	-2	-2	2	-2	2	6	2	-2	-2	-2	-2	2	2	2	-2	2	-2	2	-2	2	2	-2
-2	18	2	2	-2	2	6	-6	-2	2	-2	-2	-6	-2	2	2	-2	2	-6	-2	2	2	2	-2	-6	-2
-6	2	18	-2	-2	2	-2	-2	2	2	2	2	-2	-2	6	-2	-2	-2	2	6	6	-2	-2	-6	2	-2
-6	2	-2	18	2	2	-2	-2	2	2	-2	-6	2	-2	2	6	6	2	2	2	-2	2	2	2	2	2
-2	-2	-2	2	18	-2	2	2	-2	-6	2	-2	2	-6	-2	2	-2	2	2	2	-2	-2	-6	-2	-2	2
-2	2	2	2	-2	18	-2	-2	-2	-2	-2	-2	-6	2	-2	2	-2	6	2	2	2	-2	-2	-2	2	-2
2	6	-2	-2	2	-2	18	-2	-2	2	-6	-2	2	6	2	-2	2	2	-2	2	-2	2	-2	-2	2	2
-2	-6	-2	-2	2	-2	-2	18	2	-2	-2	2	-2	6	-6	-2	-2	2	2	2	2	6	-2	2	2	-6
2	-2	2	2	-2	-2	-2	2	18	-2	2	-6	-2	6	6	-2	2	-6	6	2	-2	-2	2	-2	-2	2
6	2	2	2	-6	-2	2	-2	-2	18	-6	-2	-2	-2	2	2	-6	2	-2	2	2	2	2	2	-2	2
2	-2	2	-2	2	-2	-6	-2	2	-6	18	-2	-2	-2	-2	2	2	-2	-2	-2	2	2	2	-6	-2	2
-2	-2	2	-6	-2	-2	-2	2	-6	-2	-2	18	-2	-2	2	2	2	2	2	2	-2	2	2	2	-2	2
-2	-6	-2	2	2	-6	2	-2	-2	-2	-2	-2	18	2	2	-2	2	2	2	-2	6	-2	2	-2	-2	2
-2	-2	-2	-2	-6	2	6	6	6	-2	-2	-2	2	18	2	2	-2	2	2	-2	2	2	2	2	-2	2
-2	-2	6	2	-2	-2	2	-6	6	2	-2	2	2	2	18	-2	-2	2	2	-2	-6	2	-2	-2	2	6
-2	2	-2	6	2	2	-2	-2	-2	2	-2	2	-2	2	-2	18	-2	-2	2	2	6	-2	-2	6	2	
2	2	-2	6	-2	-2	2	-2	2	-6	2	2	2	-2	-2	-2	18	-2	2	2	2	2	2	2	2	-2
2	-2	-2	2	2	6	2	2	-6	2	2	2	2	2	2	-2	-2	18	2	-2	-2	2	2	2	-2	-2
2	2	-2	2	2	2	-2	2	6	-2	-2	2	2	2	2	2	2	2	18	-2	2	2	-2	2	-2	-6
-2	-6	2	2	2	2	2	2	2	2	-2	2	-2	-2	-2	2	-2	-2	18	-2	-2	-2	-2	-6	2	6
2	-2	6	-2	-2	2	-2	2	-2	2	-2	-2	6	2	-6	2	2	-2	2	-2	18	2	-2	2	-2	-2
-2	2	6	2	-2	-2	2	6	-2	2	2	2	-2	2	2	2	2	2	2	-2	2	18	-2	-2	2	-2
2	2	-2	2	-6	-2	-2	-2	2	2	2	2	2	2	2	-2	6	2	2	-2	-2	-2	-2	18	-6	-6
-2	2	-2	2	-2	-2	-2	2	-2	2	2	2	-2	2	-2	-2	2	2	2	-2	2	-2	-6	18	-2	2
2	-2	-6	2	-2	2	-2	2	-2	-2	-6	-2	-2	-2	2	-2	2	-2	-2	-6	-2	2	-6	-2	18	2
2	-6	2	2	2	-2	2	-2	2	2	-2	2	-2	2	6	6	2	-2	-6	2	2	-2	-2	2	2	18
-2	-2	-2	2	-2	2	2	-6	-2	2	2	-2	2	2	2	2	-2	-2	2	6	-2	2	-6	2	-2	18

Table 17: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 28$, $E(s^2) = 8.48677$

-1	1	-1	1	-1	-1	1	1	-1	1	-1	-1	1	1	1	-1	-1	-1	1	-1	1	1	1	1	1	
1	1	1	-1	1	1	-1	-1	-1	-1	1	1	-1	1	1	1	1	-1	-1	-1	-1	1	1	1	1	1
-1	-1	-1	1	1	-1	1	1	-1	-1	1	1	1	-1	1	1	1	-1	-1	-1	1	-1	-1	1	-1	1
1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1	1	1	-1	-1	1	-1	-1	-1	1	-1	1	1
1	-1	1	-1	1	-1	1	1	-1	-1	1	-1	-1	1	1	1	1	-1	-1	1	1	-1	1	-1	1	-1
1	1	-1	1	1	1	1	-1	1	-1	1	1	1	1	-1	-1	1	1	1	1	1	-1	-1	-1	1	1
-1	1	-1	-1	-1	-1	-1	1	1	-1	1	1	1	-1	-1	1	1	-1	1	-1	1	-1	1	1	1	1
-1	-1	1	1	-1	-1	1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	1	1	-1	1	-1	-1	-1	1	-1
-1	1	-1	-1	1	1	-1	-1	-1	1	-1	1	-1	-1	-1	1	-1	1	1	-1	1	1	1	1	-1	-1
1	-1	1	-1	-1	1	1	1	-1	-1	-1	1	1	1	1	-1	-1	-1	1	1	1	1	1	1	1	-1
1	1	1	-1	-1	1	-1	1	1	1	1	-1	1	1	-1	1	-1	1	1	-1	-1	1	-1	-1	1	-1
-1	-1	1	1	1	1	-1	1	-1	1	1	-1	1	-1	-1	1	-1	-1	1	-1	1	-1	1	-1	-1	1
-1	-1	1	-1	1	-1	-1	1	1	-1	-1	1	1	1	1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	1
-1	1	1	-1	-1	-1	1	-1	-1	-1	1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	1	1	1	-1	-1
1	1	1	1	-1	1	1	-1	1	1	-1	1	1	-1	-1	-1	-1	-1	-1	1	1	-1	1	1	1	1
-1	-1	-1	-1	1	1	1	1	1	1	1	-1	-1	1	-1	-1	-1	1	1	-1	1	1	-1	-1	1	1
1	-1	-1	1	-1	-1	-1	1	1	1	1	-1	-1	1	-1	-1	-1	1	1	1	-1	-1	1	-1	1	-1
1	1	-1	1	1	-1	-1	1	-1	-1	-1	1	1	1	1	-1	1	1	1	-1	-1	-1	-1	-1	-1	-1

Table 18: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 53$

18	2	2	2	-2	6	-2	-6	2	2	-2	2	2	2	2	2	-2	-2	6	2	2	2	-2	-2	-2	2	-2		
2	18	-2	-2	-2	2	-2	-2	-2	2	2	2	-2	2	-2	2	6	2	-2	-2	2	-6	2	6	2	2	2		
2	-2	18	-6	-2	2	2	-2	2	-2	-2	-2	2	2	-2	-2	2	-2	-2	-2	-6	2	2	2	-2	-2	-2		
2	-2	-6	18	-2	-2	2	-2	-2	2	-2	-2	2	-2	6	-2	-2	2	-6	-2	2	-2	-2	-2	-6	-2	-2		
-2	-2	-2	-2	18	2	-2	2	-2	2	2	2	-2	2	2	2	6	6	-2	-2	2	2	-2	-2	-6	-2	2		
6	2	2	-2	2	18	-2	-2	-2	2	2	2	2	2	-2	-2	-6	2	-2	2	2	2	2	2	-2	6	-2	6	
-2	-2	2	2	-2	-2	18	-2	2	-2	-2	2	2	-2	-6	-2	2	2	-2	-6	2	6	6	-2	2	2	-2		
-6	-2	-2	-2	2	-2	-2	18	-2	2	2	-2	6	6	6	2	-2	-2	2	2	2	-2	2	2	-2	-2	2	2	
2	-2	2	-2	-2	-2	2	-2	18	2	2	2	-2	2	-6	2	-2	-2	-2	-6	2	2	2	-2	-6	-2	6	2	
2	2	-2	2	2	2	-2	2	2	18	-2	-6	-2	-2	2	2	-6	2	-2	-2	2	2	2	-2	2	-2	6	-2	
-2	2	-2	-2	2	2	-2	2	2	-2	18	2	2	-2	-2	-6	-2	2	-2	6	2	-6	2	-2	2	-6	6	2	
2	2	-2	-2	2	2	-2	-2	2	-6	2	18	-2	-2	6	2	-2	-2	2	-2	2	2	-2	2	2	-2	6	2	2
2	-2	-2	2	-2	2	2	6	-2	-2	2	-2	18	-2	-2	2	2	6	-2	-2	2	2	2	2	2	-2	2	2	
2	2	2	-2	2	2	2	6	2	-2	-2	-2	-2	18	2	-6	2	2	2	2	2	2	-2	2	-6	2	-2	2	
2	-2	2	6	2	-2	-2	6	-6	2	-2	6	-2	2	18	-2	-2	-2	-2	2	-2	-2	-2	2	2	-2	2	2	
2	2	-2	-2	2	-2	-6	2	2	2	-6	2	2	-6	-2	18	2	-2	2	-2	-2	-2	-2	2	-6	-2	2	-2	
2	6	-2	-2	2	-6	-2	-2	-2	-6	-2	2	2	-2	2	18	-2	-2	-2	-6	2	2	-2	2	-2	2	-2	6	
-2	2	2	2	6	2	2	-2	-2	2	2	-2	6	2	-2	-2	-2	18	2	-6	2	-2	-6	2	2	-2	2	-2	
-2	-2	-2	-6	6	-2	2	2	-2	-2	-2	2	-2	2	-2	2	18	2	2	-2	2	-6	2	6	2	6	2	-6	
6	-2	-2	-2	-2	2	-2	2	-6	-2	6	-2	-2	2	2	-2	-2	-6	2	18	-2	-2	-2	-2	-2	-2	2	-6	
2	2	-2	2	-2	2	-6	2	2	2	2	2	2	2	-2	-2	-6	2	2	-2	18	-2	2	-2	2	-2	-6	-6	
2	-6	-6	-2	2	2	2	-2	2	2	-6	2	2	2	-2	-2	2	-2	-2	-2	-2	18	-2	2	2	2	-2	2	
2	2	2	-2	2	2	6	2	2	2	2	-2	2	-2	-2	-2	2	-6	2	-2	2	-2	18	-2	2	-2	-2	2	
-2	6	2	-2	-2	2	6	2	-2	-2	-2	6	2	2	2	2	-2	2	-6	-2	-2	2	-2	18	-2	-2	-2	-2	
-2	2	2	-6	-2	-2	-2	-2	-6	2	2	2	2	-6	2	-6	2	2	2	2	-2	2	2	2	-2	18	2	2	
-2	2	-2	-2	-6	6	2	-2	-2	-2	-6	2	-2	2	-2	-2	-2	-2	6	-2	-2	2	-2	-2	2	18	2	6	
2	2	-2	-2	-2	-2	2	2	6	6	6	2	2	-2	2	2	-2	2	2	2	-6	-2	-2	2	2	18	2	2	
-2	2	-2	2	2	6	-2	2	2	-2	2	2	2	2	2	-2	6	-2	-6	-6	-6	2	2	-2	-2	6	2	18	

Table 19: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 18$ and $m = 29$, $E(s^2) = 8.72906$

1	-1	1	1	-1	1	1	-1	-1	-1	-1	-1	1	1	1	-1	-1	-1	-1	1	1	1	1	-1	-1	-1	1
-1	1	-1	1	-1	-1	-1	1	1	1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
-1	-1	-1	-1	1	-1	1	-1	-1	1	-1	1	1	-1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
1	-1	-1	1	1	-1	1	-1	-1	1	-1	-1	-1	1	-1	-1	1	1	1	-1	1	-1	1	1	1	1	1
-1	1	1	1	1	1	1	1	-1	1	-1	-1	1	1	1	-1	-1	1	-1	1	1	-1	1	-1	1	-1	
1	-1	-1	-1	-1	1	-1	1	1	1	1	1	1	1	-1	1	1	-1	1	1	1	-1	1	-1	-1	1	-1
1	1	1	-1	1	-1	1	1	1	1	1	1	1	1	1	-1	-1	-1	-1	1	1	-1	-1	1	1	-1	1
1	1	-1	-1	-1	-1	1	-1	-1	-1	1	-1	1	-1	-1	1	1	1	-1	1	1	1	1	1	1	-1	1
-1	1	-1	1	-1	1	1	1	-1	-1	1	1	1	-1	-1	-1	1	1	1	-1	1	1	1	1	1	1	1
1	-1	-1	-1	1	-1	-1	1	1	-1	-1	-1	1	1	-1	1	1	-1	-1	-1	1	-1	-1	-1	1	1	1
1	1	1	1	-1	-1	-1	1	-1	-1	-1	1	-1	1	1	1	1	1	1	1	-1	-1	-1	1	-1	-1	-1
-1	-1	1	-1	1	1	-1	-1	-1	1	1	1	-1	1	1	-1	1	-1	-1	1	1	1	-1	1	1	1	1
-1	-1	1	-1	-1	-1	1	1	1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	1	1	1	-1	-1
1	1	1	-1	-1	-1	1	-1	1	1	1	-1	1	-1	-1	-1	1	-1	-1	1	1	1	-1	1	1	-1	-1
1	1	1	1	1	1	-1	-1	1	-1	-1	1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	1	1	1
-1	-1	1	1	1	1	-1	1	-1	-1	1	-1	-1	-1	1	-1	1	1	-1	1	1	-1	1	-1	1	-1	-1
-1	1	-1	-1	1	1	1	-1	1	-1	-1	1	1	1	-1	1	1	1	1	-1	1	1	-1	-1	1	-1	-1
-1	-1	-1	1	-1	1	1	-1	1	1	-1	1	-1	-1	1	1	-1	1	1	-1	-1	1	-1	1	1	1	1

Table 20: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 6$, $f_{s_{\max}} = 60$

18	2	2	-2	-2	-6	-2	2	-2	-2	-2	6	2	2	-2	6	-2	2	2	-2	2	2	2	-2	2	-2	2	-2	2	-2	6			
2	18	2	2	-2	-2	-2	2	2	2	2	-2	2	2	-2	2	2	6	-6	-2	6	-2	-2	2	-2	2	6	-6	-2	2	-2	6		
2	2	18	2	2	2	-2	6	-6	-2	-2	2	-2	2	2	-2	2	-2	-6	-2	-2	2	-2	-2	2	2	-2	-2	2	2	-2	6		
-2	2	2	18	-2	6	-2	-2	-2	-2	-6	-2	-2	-2	-6	2	2	-2	-6	2	2	2	2	-6	2	2	-2	-2	2	2	-2	6		
-2	-2	2	-2	18	2	2	-2	-2	2	-2	2	6	-2	-2	2	2	-2	2	2	2	-6	2	2	-6	-2	2	-2	2	2	-2	6		
-6	-2	2	6	2	18	-2	-2	2	-2	2	-2	2	2	2	-2	-2	2	-2	-2	6	2	6	2	2	-2	-2	2	2	-2	6			
-2	-2	-2	-2	2	-2	18	-6	-2	-2	-2	-2	-2	-2	-2	2	2	-2	2	-2	-2	2	6	2	-6	6	2	-2	2	2	-2	6		
2	2	6	-2	-2	-2	-6	18	2	2	-2	-2	6	2	2	2	2	-2	2	2	-2	2	2	-2	2	2	-2	2	2	6	-6	6		
-2	2	-6	-2	-2	2	-2	2	18	-2	2	-2	2	2	2	2	-2	-2	-2	-2	-2	-2	-2	-6	-6	-2	2	2	2	2	-2	6		
-2	2	-2	-2	2	-2	-2	2	-2	18	2	6	2	-2	2	2	-2	-2	-6	-2	2	-2	2	2	6	2	-2	6	2	-2	6	-2	6	
-2	2	-2	-6	-2	2	-2	-2	2	2	18	2	-2	2	-2	-2	6	2	2	-2	-2	2	6	-2	6	-2	2	-2	2	-2	-2	6		
6	-2	2	-2	2	-2	-2	-2	-2	6	2	18	-2	2	2	-2	-2	6	-2	2	2	2	2	-6	-2	2	-2	2	2	-2	2	2	6	
2	2	-2	-2	6	2	-2	6	2	2	-2	-2	18	-6	-2	-2	2	2	-2	-2	2	6	-2	2	-2	-2	2	-2	2	-2	2	2	6	
2	2	2	-2	-2	2	-2	2	2	-2	2	2	-6	18	6	2	2	-2	-2	6	-2	2	2	6	-2	2	-2	2	-2	2	2	6		
-2	-2	2	-6	-2	2	2	2	2	2	-2	2	-2	6	18	2	-6	-2	2	-2	2	6	-2	2	-2	2	-2	2	-2	2	-2	6		
6	2	-2	2	2	-2	2	2	2	2	-2	-2	-2	2	2	18	2	-2	2	-2	2	-2	6	-2	-2	-2	-6	-2	-2	2	-2	6		
-2	2	2	2	2	-2	-2	2	-2	-2	6	-2	2	2	-6	2	18	-2	2	-2	-2	2	-2	-2	-2	6	-6	-2	2	2	-2	6		
2	6	-2	-2	-2	2	2	-2	-2	-2	2	6	2	-2	-2	-2	-2	18	-2	2	6	2	2	2	-6	-2	-2	-2	-2	-2	-2	6		
2	-6	-2	-6	2	-2	-2	2	-2	-6	2	-2	-2	2	2	2	-2	18	2	6	-2	-2	-2	2	2	2	2	2	2	2	-2	6		
-2	-2	-6	2	2	-2	-2	2	-2	-2	-2	2	-2	6	-2	-2	-2	2	2	18	-2	2	2	2	-2	-2	2	2	2	2	-2	6		
2	6	-2	2	2	6	-2	-2	-2	2	-2	2	2	-2	2	2	-2	6	6	-2	18	-2	-2	2	2	6	2	2	2	2	-2	6		
2	-2	-2	2	-6	2	2	2	-2	-2	2	2	6	2	6	-2	2	2	-2	2	-2	18	2	-2	2	2	-2	2	2	-2	-6	2		
2	-2	2	2	2	6	6	2	-2	2	6	2	-2	2	-2	6	-2	2	-2	2	-2	2	18	-2	2	-2	2	2	2	2	-2	6		
-2	2	-2	-6	2	2	2	-2	-6	2	-2	-6	2	6	2	-2	-2	2	-2	2	2	-2	-2	18	2	-2	-2	2	2	2	-2	6		
2	-2	-2	2	-6	2	-6	-2	-6	6	6	-2	-2	-2	-2	-2	-2	-6	2	-2	2	2	2	2	18	-2	2	2	2	2	-2	6		
-2	2	2	2	-2	-2	6	2	-2	2	-2	2	-2	2	2	-2	6	-2	2	-2	6	2	-2	-2	-2	18	2	6	6	2	-2	6		
2	6	2	-2	2	-2	2	2	2	-2	2	-2	2	-2	-2	-6	-6	-2	2	2	2	-2	2	-2	2	2	18	-2	2	2	-2	6		
-2	-6	-2	-2	-2	2	-2	6	2	6	-2	2	-2	2	-2	-2	-2	-2	2	2	2	-6	2	2	2	6	-2	18	2	2	-2	6		
6	-2	-2	2	2	2	2	-6	2	-2	-2	2	2	6	-2	-2	2	-6	-2	-2	2	2	-2	2	2	6	2	2	2	2	6	2	2	18

Table 21: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 20$ and $m = 21$,
 $E(s^2) = 3.80952$

1	-1	1	-1	-1	1	1	1	-1	1	-1	1	1	-1	1	1	1
-1	-1	-1	1	1	-1	-1	1	-1	1	1	1	-1	-1	1	-1	-1
1	-1	1	1	1	1	1	-1	1	-1	1	1	1	1	1	-1	1
-1	-1	1	-1	1	-1	1	1	1	1	1	-1	-1	-1	1	-1	-1
-1	1	-1	-1	-1	-1	1	1	1	-1	1	1	1	1	1	1	-1
1	1	1	-1	-1	1	-1	-1	-1	1	1	-1	1	-1	-1	1	-1
-1	-1	-1	1	1	1	1	-1	-1	-1	1	1	-1	-1	1	1	-1
1	1	1	1	1	-1	-1	1	-1	-1	-1	-1	-1	1	1	-1	1
1	1	1	1	-1	-1	1	1	-1	-1	1	1	1	-1	-1	1	-1
-1	-1	1	-1	-1	1	-1	-1	-1	-1	1	-1	-1	1	1	-1	-1
1	-1	-1	1	1	1	-1	1	1	1	1	-1	-1	1	1	1	-1
1	1	-1	1	-1	1	1	-1	1	1	-1	-1	-1	1	1	-1	-1
1	1	-1	-1	1	1	-1	-1	1	-1	1	1	-1	-1	-1	-1	1
-1	1	1	1	-1	1	1	1	1	-1	1	-1	1	-1	-1	-1	-1
-1	1	1	-1	1	-1	-1	-1	1	1	-1	1	1	1	-1	-1	-1
-1	1	-1	-1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	1	1
-1	-1	1	1	-1	-1	-1	-1	1	-1	-1	-1	1	-1	-1	1	1
-1	1	-1	1	1	-1	1	-1	-1	1	1	1	1	-1	-1	-1	1
1	-1	-1	-1	-1	-1	-1	1	1	-1	-1	-1	1	1	1	-1	-1
1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	1	1	1	1	1

Table 22: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 50$

20	0	0	0	-4	4	-4	0	0	0	0	0	0	0	0	0	4	0	4	0	4
0	20	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	20	0	-4	0	0	0	0	0	0	0	0	0	0	0	-4	0	0	0	4
0	0	0	20	4	0	4	0	0	0	0	0	0	0	0	0	4	0	-4	0	0
-4	0	-4	4	20	0	0	0	0	0	4	0	-4	0	0	0	-4	0	4	-4	4
4	0	0	0	0	20	4	-4	0	0	0	0	-4	0	-4	-4	0	-4	4	0	-4
-4	4	0	4	0	4	20	4	0	0	0	4	0	0	0	4	0	0	0	-4	4
0	0	0	0	0	-4	4	20	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	-4	0
0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	-4
0	0	0	0	4	0	0	0	0	0	20	0	0	0	0	0	4	0	-4	0	0
0	0	0	0	0	0	4	0	0	0	0	20	0	0	0	0	0	4	0	0	0
0	0	0	0	-4	-4	0	0	0	0	0	0	20	0	0	0	0	4	0	-4	-4
0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
0	0	0	0	0	-4	0	0	0	0	0	0	0	0	20	0	-4	0	0	0	-4
0	0	0	0	0	-4	4	0	0	0	0	0	0	0	0	20	-4	0	4	0	0
4	0	-4	4	-4	0	0	0	0	0	4	0	0	0	-4	-4	20	0	4	-4	0
0	0	0	0	0	-4	0	0	0	0	0	0	0	0	0	0	20	4	0	-4	-4
4	0	0	-4	4	4	0	0	-4	0	-4	4	4	0	0	4	4	4	20	0	0
0	0	0	0	-4	0	-4	0	0	0	0	0	0	0	0	0	-4	0	0	20	4
4	0	4	0	4	-4	4	0	-4	-4	0	0	-4	0	-4	0	0	-4	0	4	20

Table 23: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 22$ and $m = 22$,
 $E(s^2) = 4.00000$

-1	1	1	-1	1	-1	-1	-1	1	1	-1	-1	1	1	-1	1	1	-1	1	1
-1	1	-1	-1	-1	-1	-1	1	1	-1	1	1	-1	1	1	-1	-1	1	-1	1
1	1	-1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	-1	-1	1	-1	-1	1
-1	-1	1	-1	1	1	-1	-1	-1	1	1	1	1	1	-1	-1	1	-1	-1	1
1	-1	1	-1	-1	-1	1	1	1	-1	-1	-1	-1	-1	1	-1	-1	-1	1	1
1	-1	1	-1	-1	1	-1	1	-1	1	-1	-1	-1	1	-1	1	1	-1	1	-1
1	1	1	1	-1	1	-1	1	-1	-1	1	1	1	-1	1	1	1	-1	-1	1
-1	-1	-1	1	1	-1	-1	1	-1	-1	1	1	-1	-1	1	-1	1	-1	1	-1
1	1	-1	-1	-1	1	1	1	-1	1	1	-1	1	1	-1	1	1	1	-1	-1
-1	-1	-1	-1	1	1	1	-1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1	-1
-1	-1	-1	1	-1	1	-1	1	1	1	-1	-1	-1	-1	-1	1	-1	1	-1	1
1	1	-1	1	1	1	1	-1	-1	-1	-1	-1	1	-1	-1	-1	1	-1	1	1
-1	1	1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	1	-1
1	1	1	-1	1	-1	1	1	1	-1	-1	1	1	1	1	-1	1	-1	1	1
-1	-1	-1	1	-1	-1	1	-1	1	1	1	-1	1	1	1	1	1	-1	1	-1
1	-1	1	1	1	-1	-1	1	1	-1	1	-1	1	1	1	1	1	-1	1	-1
-1	1	-1	1	1	-1	1	1	-1	1	1	-1	-1	1	1	1	-1	1	1	-1
1	1	-1	-1	1	1	-1	-1	1	-1	1	1	-1	-1	1	1	1	1	1	-1
1	-1	-1	1	-1	1	-1	-1	1	1	-1	1	1	1	1	1	-1	-1	1	1
1	-1	1	1	1	-1	1	-1	-1	1	1	1	-1	-1	1	1	-1	-1	1	1
-1	-1	1	-1	-1	1	1	-1	-1	-1	1	-1	1	1	1	1	1	1	-1	1
-1	1	1	1	1	1	1	1	1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1

Table 24: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 2$, $f_{s_{\max}} = 231$

22	2	2	-2	-2	2	2	2	-2	-2	-2	2	2	-2	-2	-2	2	2	2	2	2	2
2	22	-2	-2	2	-2	2	2	-2	-2	2	2	-2	2	-2	2	-2	-2	2	-2	2	2
2	-2	22	-2	2	-2	-2	2	-2	-2	-2	2	-2	2	2	-2	2	-2	2	-2	2	2
-2	-2	-2	22	2	-2	-2	2	-2	2	2	-2	-2	2	-2	2	-2	-2	2	2	-2	-2
-2	2	2	2	22	-2	2	-2	2	-2	2	2	2	-2	-2	-2	2	2	2	-2	-2	-2
2	-2	-2	-2	-2	22	-2	-2	-2	2	-2	2	-2	2	-2	2	2	-2	-2	-2	-2	-2
2	2	-2	-2	2	-2	22	-2	-2	2	-2	-2	-2	2	2	2	-2	-2	-2	-2	-2	2
2	2	2	2	-2	-2	-2	22	2	-2	-2	-2	-2	-2	-2	2	2	-2	-2	-2	-2	2
-2	-2	-2	-2	2	-2	-2	2	22	-2	-2	-2	2	2	2	2	-2	-2	2	-2	-2	2
-2	-2	-2	2	-2	2	2	-2	-2	22	-2	-2	2	-2	2	2	2	-2	2	-2	-2	2
-2	2	-2	2	2	-2	-2	-2	-2	-2	22	-2	2	2	2	-2	2	2	2	-2	-2	2
2	2	2	-2	2	2	-2	-2	-2	-2	-2	22	2	2	2	2	2	-2	-2	-2	2	-2
2	-2	-2	-2	2	-2	-2	-2	2	2	2	2	22	2	2	2	2	-2	-2	-2	2	2
-2	2	2	2	-2	2	2	-2	2	-2	2	2	2	22	-2	-2	-2	2	2	2	2	2
-2	-2	2	-2	-2	-2	2	-2	2	2	2	2	2	-2	22	2	2	2	2	-2	2	2
-2	2	-2	2	-2	2	2	2	2	2	-2	2	2	-2	2	22	-2	2	2	2	2	-2
2	-2	2	-2	-2	2	-2	2	-2	2	2	2	2	-2	2	-2	22	-2	2	2	2	-2
2	-2	-2	-2	2	-2	-2	-2	-2	-2	2	-2	-2	2	2	2	-2	22	2	-2	-2	2
2	2	2	2	2	2	-2	-2	-2	2	2	2	-2	-2	2	2	2	2	22	-2	-2	-2
2	-2	-2	2	2	-2	-2	-2	-2	-2	-2	-2	-2	2	-2	2	2	-2	-2	22	-2	-2
2	2	2	-2	-2	-2	-2	-2	-2	-2	2	2	2	2	2	2	2	-2	-2	-2	22	2
2	2	2	-2	-2	-2	2	2	2	2	2	2	2	2	2	-2	-2	2	-2	-2	2	22

Table 25: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 22$ and $m = 23$, $E(s^2) = 4.00000$

-1	1	1	1	-1	1	-1	1	1	-1	1	1	-1	1	1	-1	1	1	-1	1	1			
1	1	1	1	-1	-1	1	1	-1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-1		
-1	1	1	-1	1	-1	1	1	-1	-1	1	-1	1	1	-1	1	-1	-1	1	1	1	1		
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	1	1	-1	-1	-1	1	1	-1	1	1	-1	-1	
-1	-1	1	-1	-1	1	1	1	1	1	1	-1	1	-1	1	1	-1	-1	1	1	-1	-1	-1	
-1	1	-1	1	1	1	1	-1	1	1	1	1	1	-1	-1	1	1	-1	-1	-1	-1	-1	1	
1	1	-1	-1	-1	-1	1	1	-1	1	-1	1	-1	-1	1	1	1	1	1	1	1	-1	-1	1
1	1	1	1	-1	-1	-1	-1	-1	1	-1	1	1	-1	1	1	-1	-1	-1	1	-1	1	-1	-1
-1	-1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	-1	-1	-1	-1	-1	-1
1	-1	-1	-1	1	-1	1	-1	1	-1	1	-1	-1	1	1	1	1	-1	-1	1	-1	1	-1	-1
-1	1	-1	-1	-1	1	-1	1	1	-1	-1	-1	-1	-1	-1	1	1	-1	1	-1	1	1	1	-1
-1	1	-1	1	1	1	1	-1	-1	1	-1	-1	1	1	1	-1	1	1	1	1	1	1	1	-1
-1	-1	1	1	-1	-1	-1	-1	1	1	-1	1	-1	1	1	1	-1	1	1	-1	1	-1	-1	-1
1	-1	1	-1	1	1	-1	1	1	1	-1	-1	1	1	-1	1	1	1	-1	1	1	-1	1	1
-1	-1	-1	1	1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	1
-1	1	1	-1	1	-1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1	1	1	1	-1	1	-1	1
1	-1	-1	1	-1	1	1	1	-1	-1	1	1	1	1	-1	1	-1	-1	1	1	1	1	1	1
1	1	-1	-1	1	-1	-1	1	1	1	1	1	1	1	1	-1	-1	-1	1	1	-1	-1	1	-1
1	-1	-1	1	1	1	1	1	1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-1	-1
1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
1	-1	1	1	-1	-1	1	-1	1	-1	-1	-1	1	-1	-1	-1	1	1	1	-1	-1	1	1	1

Table 26: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 2$, $f_{s_{\max}} = 253$

22	-2	-2	-2	-2	-2	2	2	-2	2	-2	2	2	2	-2	2	-2	-2	-2	2	2		
-2	22	-2	-2	-2	-2	2	2	-2	2	-2	2	2	2	-2	2	-2	-2	-2	-2	2	2	
-2	-2	22	2	-2	-2	-2	-2	2	2	2	-2	-2	2	2	2	-2	2	2	-2	2	-2	2
-2	-2	2	22	-2	2	2	-2	-2	2	-2	2	-2	2	-2	-2	2	-2	-2	-2	2	2	-2
-2	-2	-2	-2	22	2	2	-2	2	2	2	-2	-2	2	-2	-2	2	-2	-2	2	2	2	2
-2	-2	-2	2	2	22	-2	2	2	-2	2	-2	2	2	2	2	-2	2	-2	2	-2	2	2
2	2	-2	2	2	-2	22	2	2	-2	2	-2	2	-2	2	2	2	-2	2	2	2	-2	2
2	2	-2	-2	-2	2	2	22	2	2	2	-2	-2	-2	-2	2	-2	2	-2	2	2	2	2
-2	-2	2	-2	2	2	2	2	22	-2	-2	2	-2	2	-2	2	2	2	2	-2	-2	-2	-2
2	2	2	2	2	-2	-2	2	-2	22	-2	2	2	-2	2	2	2	-2	2	2	-2	-2	-2
-2	-2	2	-2	2	2	2	-2	-2	22	2	2	2	-2	2	2	-2	-2	-2	-2	2	-2	-2
2	2	-2	2	-2	-2	-2	-2	2	2	2	22	-2	-2	2	-2	-2	2	2	2	2	-2	2
2	2	-2	-2	-2	2	2	-2	-2	2	2	-2	22	-2	-2	2	-2	2	-2	2	-2	2	2
2	2	2	2	2	2	-2	-2	2	-2	2	-2	-2	22	-2	-2	2	2	2	2	-2	-2	-2
2	2	2	-2	-2	2	2	-2	-2	2	-2	2	-2	-2	22	2	-2	2	-2	2	-2	2	-2
-2	-2	2	-2	-2	2	2	2	2	2	-2	2	-2	2	22	-2	-2	2	2	-2	-2	-2	-2
2	2	-2	-2	-2	2	2	-2	2	2	-2	-2	-2	-2	-2	22	2	-2	2	2	2	2	2
-2	-2	2	2	2	-2	-2	2	2	-2	-2	2	2	2	-2	2	22	2	-2	2	-2	-2	-2
-2	-2	2	-2	-2	2	2	-2	2	2	-2	2	-2	2	-2	2	-2	22	-2	2	2	2	-2
-2	-2	-2	-2	-2	-2	2	2	-2	2	-2	2	2	2	2	2	-2	-2	22	-2	2	2	2
-2	-2	2	-2	2	2	2	2	-2	-2	-2	2	-2	2	-2	2	2	2	-2	22	-2	-2	-2
2	2	-2	2	2	-2	-2	2	-2	-2	2	-2	2	-2	2	-2	2	2	2	-2	22	2	2
2	2	2	-2	2	2	2	2	-2	-2	-2	2	2	-2	-2	2	-2	-2	2	-2	2	22	2

Table 27: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 24$ and $m = 24$, $E(s^2) = 2.08696$

-1	1	1	1	1	-1	1	1	-1	1	-1	1	1	1	-1	1	1	-1	1	1	1	1
1	1	-1	1	-1	-1	1	1	1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-1	1
-1	-1	-1	-1	1	-1	1	1	1	1	1	-1	-1	-1	-1	1	-1	1	-1	1	-1	-1
-1	1	1	1	-1	-1	-1	-1	-1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	1	-1
1	1	1	-1	-1	1	-1	1	-1	-1	-1	1	-1	-1	1	1	-1	1	-1	-1	-1	-1
1	-1	-1	1	-1	-1	-1	-1	1	-1	1	1	-1	1	-1	1	1	1	1	-1	-1	1
-1	1	1	-1	-1	1	1	1	1	-1	1	-1	1	1	-1	-1	1	1	-1	1	-1	1
1	1	1	-1	-1	1	1	-1	1	1	-1	1	1	-1	-1	-1	1	1	1	1	1	1
1	-1	1	1	1	1	1	-1	-1	-1	1	-1	-1	1	1	-1	-1	-1	1	1	1	-1
1	1	1	-1	1	-1	-1	1	1	1	1	-1	-1	-1	1	-1	1	1	1	-1	-1	1
-1	-1	1	1	-1	-1	1	-1	1	-1	-1	-1	-1	1	1	1	-1	1	1	-1	-1	1
-1	1	1	-1	1	1	-1	-1	-1	-1	-1	1	1	-1	1	1	1	1	1	-1	1	1
-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1
-1	1	-1	-1	-1	-1	1	-1	-1	1	-1	1	1	1	1	-1	1	1	-1	1	1	-1
-1	-1	1	1	1	1	-1	1	1	1	-1	1	1	1	-1	-1	-1	1	-1	-1	-1	-1
1	-1	-1	1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	1	1	1	1	1	1	1	-1
-1	-1	1	-1	-1	1	-1	-1	1	1	1	1	-1	1	1	-1	1	1	-1	-1	1	1
-1	-1	-1	-1	-1	1	1	1	-1	-1	1	1	1	-1	1	1	1	-1	1	1	-1	1
1	1	-1	-1	1	1	1	-1	-1	1	1	1	-1	1	1	-1	1	-1	-1	-1	1	-1
-1	1	-1	1	-1	1	-1	1	1	-1	1	1	1	1	-1	-1	-1	1	-1	-1	1	1
1	-1	-1	1	1	1	1	-1	1	1	-1	-1	1	-1	-1	1	1	-1	-1	-1	-1	1
1	-1	1	1	1	-1	1	1	-1	-1	1	1	1	-1	-1	1	1	-1	1	-1	-1	1
1	-1	-1	-1	1	-1	-1	1	1	-1	-1	1	1	1	-1	-1	1	1	-1	1	1	-1
1	1	-1	1	1	-1	-1	1	-1	1	-1	1	1	1	1	-1	-1	1	1	1	1	-1

Table 28: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 36$

24	0	-4	4	4	0	0	0	4	-4	0	0	-4	-4	0	-4	0	0	0	4	0	0	0	0
0	24	4	-4	-4	0	0	0	-4	4	0	0	4	4	0	4	0	0	0	-4	0	0	0	0
-4	4	24	0	0	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
4	-4	0	24	0	-4	0	0	0	0	0	-4	0	0	0	0	0	0	0	0	0	0	0	0
4	-4	0	0	24	-4	0	0	0	0	0	-4	0	0	0	0	0	0	0	0	0	0	0	0
0	0	4	-4	-4	24	0	0	-4	4	0	0	4	4	0	4	0	0	0	-4	0	0	0	0
0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-4	0	0	0	-4	0	0	24	0	0	-4	0	0	0	0	0	0	0	0	0	0	0	0
-4	4	0	0	0	4	0	0	0	24	0	4	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	4	-4	-4	0	0	0	-4	4	0	24	4	4	0	4	0	0	0	-4	0	0	0	0
-4	4	0	0	0	4	0	0	0	0	0	4	24	0	0	0	0	0	0	0	0	0	0	0
-4	4	0	0	0	4	0	0	0	0	0	4	0	24	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
-4	4	0	0	0	4	0	0	0	0	0	4	0	0	0	24	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0
4	-4	0	0	0	-4	0	0	0	0	0	-4	0	0	0	0	0	0	0	24	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24

Table 29: An $E(s^2)$ -optimal and minimax-optimal SSD of size $N = 24$ and $m = 25$, $E(s^2) = 3.84000$

-1	-1	1	-1	1	1	-1	-1	1	1	-1	1	1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	-1	1
-1	-1	-1	-1	1	1	1	1	1	1	1	-1	1	-1	1	1	1	1	1	1	-1	-1	1	1	1
-1	1	1	1	1	-1	1	-1	-1	-1	-1	1	1	1	1	-1	1	1	1	-1	1	1	1	1	1
1	1	1	-1	1	1	-1	1	-1	1	-1	-1	-1	1	-1	-1	1	1	-1	1	1	1	1	1	1
-1	-1	1	-1	-1	1	1	1	-1	1	-1	-1	1	1	1	1	1	-1	-1	-1	-1	1	-1	-1	-1
1	-1	1	-1	-1	-1	1	-1	1	1	1	-1	-1	-1	-1	1	1	-1	-1	1	-1	1	1	1	1
1	-1	-1	1	-1	1	-1	-1	1	-1	1	1	1	-1	1	1	1	1	1	-1	1	1	1	-1	1
1	1	-1	1	-1	1	1	1	1	-1	-1	1	-1	1	1	-1	-1	-1	-1	-1	-1	1	1	1	1
1	1	-1	-1	1	1	-1	-1	-1	-1	1	1	-1	1	-1	-1	1	1	-1	1	-1	1	1	-1	-1
-1	1	-1	-1	1	1	1	-1	1	-1	-1	-1	1	-1	-1	-1	1	-1	1	-1	-1	1	-1	1	-1
1	-1	1	1	1	-1	-1	-1	1	-1	1	-1	-1	1	1	-1	1	1	1	-1	-1	-1	-1	1	-1
-1	1	1	1	-1	-1	1	1	1	-1	-1	1	-1	-1	1	-1	1	1	-1	1	1	1	-1	-1	-1
-1	1	1	1	-1	1	-1	1	-1	-1	1	-1	-1	-1	1	-1	-1	1	1	-1	-1	-1	-1	1	1
1	1	1	1	-1	1	1	-1	-1	1	1	1	1	-1	-1	1	-1	1	-1	-1	1	-1	-1	1	-1
-1	-1	1	-1	-1	-1	-1	1	-1	-1	1	1	1	1	-1	-1	1	-1	-1	-1	1	1	-1	1	1
-1	-1	-1	1	-1	1	-1	-1	-1	1	-1	-1	-1	1	1	1	-1	-1	-1	1	1	1	-1	1	-1
-1	1	1	-1	-1	-1	-1	-1	1	1	-1	1	-1	1	-1	-1	1	-1	1	-1	1	-1	1	-1	-1
1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	1	1	-1	-1	-1	1	1	1	1	-1	-1	-1	1	1
1	-1	1	1	1	1	1	1	1	1	1	-1	1	1	-1	-1	-1	1	1	1	1	1	1	-1	-1
1	-1	-1	1	-1	-1	-1	1	-1	1	-1	1	1	-1	-1	-1	1	-1	1	1	-1	-1	1	1	-1
-1	1	-1	-1	1	-1	-1	1	1	-1	1	-1	1	1	-1	1	-1	1	1	-1	1	1	-1	1	-1
1	-1	-1	-1	1	-1	1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1	-1	-1	1	-1	-1	-1
1	1	-1	1	1	-1	-1	1	1	1	-1	-1	1	1	-1	1	1	1	-1	-1	1	-1	-1	1	1
-1	1	-1	1	1	-1	1	-1	-1	1	1	-1	-1	1	-1	1	-1	-1	-1	1	-1	1	-1	1	1

Table 30: $\mathbf{D}^T \mathbf{D}$, $s_{\max} = 4$, $f_{s_{\max}} = 72$

24	-4	-4	4	0	0	0	0	0	0	4	0	0	0	-4	-4	0	4	4	-4	-4	4	4	0	0
-4	24	0	4	4	0	0	0	0	-4	-4	0	-4	-4	0	0	-4	4	-4	-4	0	0	4	0	0
-4	0	24	0	-4	0	0	0	0	4	0	0	0	0	0	0	-4	0	0	0	0	0	0	0	0
4	4	0	24	-4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
0	4	-4	-4	24	0	0	0	4	0	4	-4	0	0	4	-4	0	4	4	0	-4	4	0	0	0
0	0	0	0	0	24	0	0	0	4	0	0	0	0	0	0	-4	0	0	0	0	0	0	0	0
0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	0	0	0	24	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
0	-4	4	0	0	4	0	0	0	24	-4	-4	0	0	-4	4	0	-4	-4	0	4	-4	4	0	0
4	-4	0	0	4	0	0	0	0	-4	24	0	-4	-4	-4	4	4	0	0	0	4	0	0	0	0
0	0	0	0	-4	0	0	0	-4	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	-4	0	0	0	0	0	0	0	-4	0	24	0	-4	0	0	4	0	0	0	0	0	0	0	0
0	-4	0	0	0	0	0	0	0	-4	0	0	24	-4	0	0	4	0	0	0	0	0	0	0	0
-4	0	0	4	4	0	0	0	0	-4	-4	0	-4	-4	24	0	-4	4	-4	-4	0	0	4	0	0
-4	0	0	0	-4	0	0	0	0	4	4	0	0	0	0	24	-4	4	0	0	0	0	0	0	0
0	-4	-4	0	0	-4	0	0	4	0	4	0	0	-4	-4	24	4	-4	-4	-4	4	0	0	0	0
4	4	0	0	4	0	0	0	0	-4	0	0	4	4	4	4	24	0	0	4	0	0	0	0	0
4	-4	0	0	4	0	0	0	0	-4	0	0	0	0	-4	0	-4	0	24	0	0	0	0	0	0
-4	-4	0	0	0	0	0	0	0	0	0	0	0	0	-4	0	-4	0	0	24	0	0	0	0	0
-4	0	0	0	-4	0	0	0	0	4	4	0	0	0	0	-4	4	0	0	24	0	0	0	0	0
4	0	0	0	4	0	0	0	0	-4	0	0	0	0	0	0	4	0	0	0	0	24	0	0	0
4	4	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	24	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24