**САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ ПОЛИТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ**

ФАКУЛЬТЕТ ТЕХНИЧЕСКОЙ КИБЕРНЕТИКИ

КАФЕДРА «ИНФОРМАЦИОННЫЕ И УПРАВЛЯЮЩИЕ СИСТЕМЫ»

Расчётная работа №2

по

системам обработки многомерной информации

*Получение выходного сигнала с помощью КИХ-фильтра.*

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***Формулировка задания:***

Для импульсного отклика и входного сигнала необходимо получить выходной сигнал двумя способами:

* с помощью свёртки = \* \*
* путём сдвига и взвешивания

=  = 

*Некоторые комментарии:*

* программа написана в среде MatLab R2010B
* все матрицы в программе индексируются от 1
* при вычислениях учтено расположение осей координат:

= 

*h(1,2)*

*h(1,1)*

*h(2,1)*

* результаты выполнения программы выводятся в текстовый файл out.txt, который полностью приведён после текста программы.

***Текст программы:***

clear h x y1 y2 % удаление переменных рабочей среды

% Импульсный отклик

h=[0 0 0 0 0 0 0 0;

0 3 3 3 4 4 4 5;

2 3 4 5 6 2 3 4;

1 2 3 4 5 4 3 2;

4 5 3 4 2 0 5 5;

6 6 7 7 4 5 3 6;

2 3 4 5 6 3 4 5;

2 0 3 0 4 0 2 1];

% Входной сигнал

x=[4 3 4 2 4 5 6 3;

0 3 3 4 4 5 5 3;

4 2 3 0 5 0 6 0;

3 5 0 6 4 5 6 7;

0 2 3 4 5 3 5 2;

0 0 -1 -2 -1 5 4 3;

0 2 3 4 3 5 6 0;

2 3 4 2 5 3 6 0];

row\_h=size(h,1); % число строк в матрице h

col\_h=size(h,2); % число столбцов матрицы h

row\_x=size(x,1); % число строк матрицы х

col\_x=size(x,2); % число столбцов матрицы x

% \*\*\*\*\*\*\*\*\*\*\*\*Свёртка\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

% Размерность матрицы результата - выходного сигнала y(n1,n2)

row\_Y=row\_h+row\_x-1;

col\_Y=col\_h+col\_x-1;

% Заполнение матрицы результата нулями

y1 (1:row\_Y,1:col\_Y)=0;

for i=row\_Y:-1:1

for j=1:col\_Y

for k1=1:row\_h

for k2=1:col\_h

if (i-k1+1)>=1 & (i-k1+1)<=row\_x & (j-k2+1)>=1 & (j-k2+1)<=col\_x

y1(i,j)=y1(i,j)+h(k1,k2)\*x(i-k1+1,j-k2+1);

end

end

end

end

end

% Вывод данных в файл out.txt

[F, mes] = fopen('out.txt', 'wt');

fprintf(F, 'Исходные данные:\n');

fprintf(F, '\n');

fprintf(F, 'импульсный отклик h(n1,n2)\n');

for i=1:row\_h

for j=1:col\_h

fprintf(F, '%1d', h(i,j));

end

fprintf(F, '\n');

end

fprintf(F, '\n');

fprintf(F, 'входной сигнал x(n1,n2)\n');

for i=1:row\_x

for j=1:col\_x

fprintf(F, '%1d', x(i,j));

end

fprintf(F, '\n');

end

fprintf(F, '\n');

fprintf(F, 'свёртка \n');

fprintf(F, '\n');

fprintf(F, 'выходной сигнал y(n1,n2)=h(n1,n2)\*\*x(n1,n2):\n');

fprintf(F, '\n');

for i=1:row\_Y

for j=1:col\_Y

fprintf(F, '%3d', y1(i,j));

end

fprintf(F, '\n');

end

fprintf(F, '\n');

% \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Сдвиг и взвешивание\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* %

% Вывод данных в файл out.txt

fprintf(F, '\n');

fprintf(F, 'сдвиг и взвешивание \n');

fprintf(F, '\n');

fprintf(F, 'матрицы, полученные путём сдвига и взвешивания \n');

fprintf(F, '\n');

kol\_matr=row\_x\*col\_x; % кол-во матриц, которое будет получено путём сдвига и взвешивания

M=cat(3); % создание трёхмерной матрицы

% Размерность одного измерения трёхмерной матрицы

row\_M=row\_h+row\_x-1;

col\_M=col\_h+col\_x-1;

max\_dim=max(row\_M,col\_M); % максимум из двух измерений

% Заполнение трёхмерной матрицы нулями

for i=1:kol\_matr

M(1:row\_M,1:col\_M,i)=0;

end

% Заполнение трёхмерной матрицы

j=1;

k=1;

for i=1:kol\_matr

M(j:j+row\_h-1,k:k+col\_h-1,i)=h\*x(j,k);

fprintf(F, 'h\*x(%1d,%1d)\n',row\_x-j+1,k);

for i1=1:row\_M

for j1=1:col\_M

fprintf(F, '%3d',M(i1,j1,i));

end

fprintf(F, '\n');

end

fprintf(F, '\n');

if k==col\_x % переход на следующую строку

if j~=row\_x

k=1;

j=j+1;

else % умножители на все эл-ты матрицы х

break

end

else

k=k+1;

end

end

y2(1:row\_M,1:col\_M)=0; % заполнение результирующей матрицы нулями

% Вычесление результата - выходного сигнала y(n1,n2)

for i=1:row\_M

for j=1:col\_M

for n=1:kol\_matr

y2(i,j)=y2(i,j)+M(i,j,n);

end

end

end

% Визуализация результата

figure;

[x\_gr,y\_gr]=meshgrid(1:1:col\_M,1:1:row\_M);

surf(x\_gr,y\_gr,y2);

colorbar;

title('ВЫХОДНОЙ СИГНАЛ y(n\_{1},n\_{2})');

xlabel('n\_{1}');

ylabel('n\_{2}');

figure;

imagesc(y2);

colormap(cool);

colorbar;

title('ВЫХОДНОЙ СИГНАЛ y(n\_{1},n\_{2})');

xlabel('n\_{1}');

ylabel('n\_{2}');

% Вывод данных в файл out.txt

fprintf(F, '\n');

fprintf(F, 'выходной сигнал y(n1,n2):\n');

fprintf(F, '\n');

for i=1:row\_M

for j=1:col\_M

fprintf(F, '%3d ', y2(i,j));

end

fprintf(F, '\n');

end

fclose(F);

***Файл результатов out.txt:***

Исходные данные:

Импульсный отклик h(n1,n2)

0 0 0 0 0 0 0 0

0 3 3 3 4 4 4 5

2 3 4 5 6 2 3 4

1 2 3 4 5 4 3 2

4 5 3 4 2 0 5 5

6 6 7 7 4 5 3 6

2 3 4 5 6 3 4 5

2 0 3 0 4 0 2 1

Входной сигнал x(n1,n2)

4 3 4 2 4 5 6 3

0 3 3 4 4 5 5 3

4 2 3 0 5 0 6 0

3 5 0 6 4 5 6 7

0 2 3 4 5 3 5 2

0 0 -1-2 -1 5 4 3

0 2 3 4 3 5 6 0

2 3 4 2 5 3 6 0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Свёртка\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Выходной сигнал y(n1,n2)=h(n1,n2)\*\*x(n1,n2):

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 12 21 33 43 58 77101 97 91 79 76 61 42 15

8 18 42 66 99121158191208193166133101 70 27

4 29 55 91130185216262257240205170105 80 18

24 60104133192232310372378312293233187146 56

34 83149215296372434537509455396316226175 71

27 79134203290356474556545490441353288202 70

44 85138177281325465578556527441363260221 69

26 88133231304392493586583522479354273204 61

18 49103150263319459494531422391289228171 62

8 29 53 98131236295375358344282230194128 35

8 38 71108142190257268282242203167156107 17

12 34 66 92134178224248230233161143 98 76 3

4 16 31 52 74103125136144122109 68 56 36 0

4 6 14 13 30 24 47 25 49 20 36 11 15 6 0

\*\*\*\*\*\*\*\*\*\*\*\*\*Сдвиг и взвешивание\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Матрицы, полученные путём сдвига и взвешивания

h\*x(8,1)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 12 12 12 16 16 16 20 0 0 0 0 0 0 0

8 12 16 20 24 8 12 16 0 0 0 0 0 0 0

4 8 12 16 20 16 12 8 0 0 0 0 0 0 0

16 20 12 16 8 0 20 20 0 0 0 0 0 0 0

24 24 28 28 16 20 12 24 0 0 0 0 0 0 0

8 12 16 20 24 12 16 20 0 0 0 0 0 0 0

8 0 12 0 16 0 8 4 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 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 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 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 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(8,2)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 9 9 9 12 12 12 15 0 0 0 0 0 0

0 6 9 12 15 18 6 9 12 0 0 0 0 0 0

0 3 6 9 12 15 12 9 6 0 0 0 0 0 0

0 12 15 9 12 6 0 15 15 0 0 0 0 0 0

0 18 18 21 21 12 15 9 18 0 0 0 0 0 0

0 6 9 12 15 18 9 12 15 0 0 0 0 0 0

0 6 0 9 0 12 0 6 3 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 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 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 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 0 0 0 0 0 0 0 0 0 0 0

h\*x(8,3)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 12 12 12 16 16 16 20 0 0 0 0 0

0 0 8 12 16 20 24 8 12 16 0 0 0 0 0

0 0 4 8 12 16 20 16 12 8 0 0 0 0 0

0 0 16 20 12 16 8 0 20 20 0 0 0 0 0

0 0 24 24 28 28 16 20 12 24 0 0 0 0 0

0 0 8 12 16 20 24 12 16 20 0 0 0 0 0

0 0 8 0 12 0 16 0 8 4 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 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

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 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 0 0 0 0 0 0 0 0 0 0

h\*x(8,4)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 6 6 6 8 8 8 10 0 0 0 0

0 0 0 4 6 8 10 12 4 6 8 0 0 0 0

0 0 0 2 4 6 8 10 8 6 4 0 0 0 0

0 0 0 8 10 6 8 4 0 10 10 0 0 0 0

0 0 0 12 12 14 14 8 10 6 12 0 0 0 0

0 0 0 4 6 8 10 12 6 8 10 0 0 0 0

0 0 0 4 0 6 0 8 0 4 2 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 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 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 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 0 0 0 0 0 0 0 0 0

h\*x(8,5)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 12 12 12 16 16 16 20 0 0 0

0 0 0 0 8 12 16 20 24 8 12 16 0 0 0

0 0 0 0 4 8 12 16 20 16 12 8 0 0 0

0 0 0 0 16 20 12 16 8 0 20 20 0 0 0

0 0 0 0 24 24 28 28 16 20 12 24 0 0 0

0 0 0 0 8 12 16 20 24 12 16 20 0 0 0

0 0 0 0 8 0 12 0 16 0 8 4 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 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 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 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 0 0 0 0 0 0 0 0

h\*x(8,6)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 15 15 15 20 20 20 25 0 0

0 0 0 0 0 10 15 20 25 30 10 15 20 0 0

0 0 0 0 0 5 10 15 20 25 20 15 10 0 0

0 0 0 0 0 20 25 15 20 10 0 25 25 0 0

0 0 0 0 0 30 30 35 35 20 25 15 30 0 0

0 0 0 0 0 10 15 20 25 30 15 20 25 0 0

0 0 0 0 0 10 0 15 0 20 0 10 5 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 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 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 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 0 0 0 0 0 0 0

h\*x(8,7)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 18 18 18 24 24 24 30 0

0 0 0 0 0 0 12 18 24 30 36 12 18 24 0

0 0 0 0 0 0 6 12 18 24 30 24 18 12 0

0 0 0 0 0 0 24 30 18 24 12 0 30 30 0

0 0 0 0 0 0 36 36 42 42 24 30 18 36 0

0 0 0 0 0 0 12 18 24 30 36 18 24 30 0

0 0 0 0 0 0 12 0 18 0 24 0 12 6 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 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 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 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 0 0 0 0 0 0

h\*x(8,8)

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 9 9 9 12 12 12 15

0 0 0 0 0 0 0 6 9 12 15 18 6 9 12

0 0 0 0 0 0 0 3 6 9 12 15 12 9 6

0 0 0 0 0 0 0 12 15 9 12 6 0 15 15

0 0 0 0 0 0 0 18 18 21 21 12 15 9 18

0 0 0 0 0 0 0 6 9 12 15 18 9 12 15

0 0 0 0 0 0 0 6 0 9 0 12 0 6 3

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 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 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

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 0 0 0 0 0

h\*x(7,1)

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 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 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

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 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 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

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 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 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

h\*x(7,2)

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 0 0 0 0 0

0 0 9 9 9 12 12 12 15 0 0 0 0 0 0

0 6 9 12 15 18 6 9 12 0 0 0 0 0 0

0 3 6 9 12 15 12 9 6 0 0 0 0 0 0

0 12 15 9 12 6 0 15 15 0 0 0 0 0 0

0 18 18 21 21 12 15 9 18 0 0 0 0 0 0

0 6 9 12 15 18 9 12 15 0 0 0 0 0 0

0 6 0 9 0 12 0 6 3 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 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 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 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,3)

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 0 0 0 0 0

0 0 0 9 9 9 12 12 12 15 0 0 0 0 0

0 0 6 9 12 15 18 6 9 12 0 0 0 0 0

0 0 3 6 9 12 15 12 9 6 0 0 0 0 0

0 0 12 15 9 12 6 0 15 15 0 0 0 0 0

0 0 18 18 21 21 12 15 9 18 0 0 0 0 0

0 0 6 9 12 15 18 9 12 15 0 0 0 0 0

0 0 6 0 9 0 12 0 6 3 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,4)

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 0 0 0 0 0

0 0 0 0 12 12 12 16 16 16 20 0 0 0 0

0 0 0 8 12 16 20 24 8 12 16 0 0 0 0

0 0 0 4 8 12 16 20 16 12 8 0 0 0 0

0 0 0 16 20 12 16 8 0 20 20 0 0 0 0

0 0 0 24 24 28 28 16 20 12 24 0 0 0 0

0 0 0 8 12 16 20 24 12 16 20 0 0 0 0

0 0 0 8 0 12 0 16 0 8 4 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 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 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 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,5)

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 0 0 0 0 0

0 0 0 0 0 12 12 12 16 16 16 20 0 0 0

0 0 0 0 8 12 16 20 24 8 12 16 0 0 0

0 0 0 0 4 8 12 16 20 16 12 8 0 0 0

0 0 0 0 16 20 12 16 8 0 20 20 0 0 0

0 0 0 0 24 24 28 28 16 20 12 24 0 0 0

0 0 0 0 8 12 16 20 24 12 16 20 0 0 0

0 0 0 0 8 0 12 0 16 0 8 4 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 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 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 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,6)

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 0 0 0 0 0

0 0 0 0 0 0 15 15 15 20 20 20 25 0 0

0 0 0 0 0 10 15 20 25 30 10 15 20 0 0

0 0 0 0 0 5 10 15 20 25 20 15 10 0 0

0 0 0 0 0 20 25 15 20 10 0 25 25 0 0

0 0 0 0 0 30 30 35 35 20 25 15 30 0 0

0 0 0 0 0 10 15 20 25 30 15 20 25 0 0

0 0 0 0 0 10 0 15 0 20 0 10 5 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 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 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 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,7)

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 0 0 0 0 0

0 0 0 0 0 0 0 15 15 15 20 20 20 25 0

0 0 0 0 0 0 10 15 20 25 30 10 15 20 0

0 0 0 0 0 0 5 10 15 20 25 20 15 10 0

0 0 0 0 0 0 20 25 15 20 10 0 25 25 0

0 0 0 0 0 0 30 30 35 35 20 25 15 30 0

0 0 0 0 0 0 10 15 20 25 30 15 20 25 0

0 0 0 0 0 0 10 0 15 0 20 0 10 5 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 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 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 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(7,8)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 9 9 9 12 12 12 15

0 0 0 0 0 0 0 6 9 12 15 18 6 9 12

0 0 0 0 0 0 0 3 6 9 12 15 12 9 6

0 0 0 0 0 0 0 12 15 9 12 6 0 15 15

0 0 0 0 0 0 0 18 18 21 21 12 15 9 18

0 0 0 0 0 0 0 6 9 12 15 18 9 12 15

0 0 0 0 0 0 0 6 0 9 0 12 0 6 3

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(6,1)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 12 12 12 16 16 16 20 0 0 0 0 0 0 0

8 12 16 20 24 8 12 16 0 0 0 0 0 0 0

4 8 12 16 20 16 12 8 0 0 0 0 0 0 0

16 20 12 16 8 0 20 20 0 0 0 0 0 0 0

24 24 28 28 16 20 12 24 0 0 0 0 0 0 0

8 12 16 20 24 12 16 20 0 0 0 0 0 0 0

8 0 12 0 16 0 8 4 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 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 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 0 0 0 0 0 0 0

h\*x(6,2)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 6 6 6 8 8 8 10 0 0 0 0 0 0

0 4 6 8 10 12 4 6 8 0 0 0 0 0 0

0 2 4 6 8 10 8 6 4 0 0 0 0 0 0

0 8 10 6 8 4 0 10 10 0 0 0 0 0 0

0 12 12 14 14 8 10 6 12 0 0 0 0 0 0

0 4 6 8 10 12 6 8 10 0 0 0 0 0 0

0 4 0 6 0 8 0 4 2 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 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 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 0 0 0 0 0 0

h\*x(6,3)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 9 9 9 12 12 12 15 0 0 0 0 0

0 0 6 9 12 15 18 6 9 12 0 0 0 0 0

0 0 3 6 9 12 15 12 9 6 0 0 0 0 0

0 0 12 15 9 12 6 0 15 15 0 0 0 0 0

0 0 18 18 21 21 12 15 9 18 0 0 0 0 0

0 0 6 9 12 15 18 9 12 15 0 0 0 0 0

0 0 6 0 9 0 12 0 6 3 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 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

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 0 0 0 0 0

h\*x(6,4)

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 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 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(6,5)

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 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 15 15 15 20 20 20 25 0 0 0

0 0 0 0 10 15 20 25 30 10 15 20 0 0 0

0 0 0 0 5 10 15 20 25 20 15 10 0 0 0

0 0 0 0 20 25 15 20 10 0 25 25 0 0 0

0 0 0 0 30 30 35 35 20 25 15 30 0 0 0

0 0 0 0 10 15 20 25 30 15 20 25 0 0 0

0 0 0 0 10 0 15 0 20 0 10 5 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 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 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 0 0 0

h\*x(6,6)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 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 0 0 0 0 0 0 0 0 0 0

h\*x(6,7)

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 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 0 0 18 18 18 24 24 24 30 0

0 0 0 0 0 0 12 18 24 30 36 12 18 24 0

0 0 0 0 0 0 6 12 18 24 30 24 18 12 0

0 0 0 0 0 0 24 30 18 24 12 0 30 30 0

0 0 0 0 0 0 36 36 42 42 24 30 18 36 0

0 0 0 0 0 0 12 18 24 30 36 18 24 30 0

0 0 0 0 0 0 12 0 18 0 24 0 12 6 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 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 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 0

h\*x(6,8)

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 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 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

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 0 0 0 0 0

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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 0 0 0 0 0

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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 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 0 0 0 0 0 0 0 0 0 0

h\*x(5,1)

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 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 0 0 0 0 0 0 0 0 0 0

0 9 9 9 12 12 12 15 0 0 0 0 0 0 0

6 9 12 15 18 6 9 12 0 0 0 0 0 0 0

3 6 9 12 15 12 9 6 0 0 0 0 0 0 0

12 15 9 12 6 0 15 15 0 0 0 0 0 0 0

18 18 21 21 12 15 9 18 0 0 0 0 0 0 0

6 9 12 15 18 9 12 15 0 0 0 0 0 0 0

6 0 9 0 12 0 6 3 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 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 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,2)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 15 15 15 20 20 20 25 0 0 0 0 0 0

0 10 15 20 25 30 10 15 20 0 0 0 0 0 0

0 5 10 15 20 25 20 15 10 0 0 0 0 0 0

0 20 25 15 20 10 0 25 25 0 0 0 0 0 0

0 30 30 35 35 20 25 15 30 0 0 0 0 0 0

0 10 15 20 25 30 15 20 25 0 0 0 0 0 0

0 10 0 15 0 20 0 10 5 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 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 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,3)

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 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 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

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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 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 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

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 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 0 0 0 0 0 0 0 0 0 0

h\*x(5,4)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 0 0 18 18 18 24 24 24 30 0 0 0 0

0 0 0 12 18 24 30 36 12 18 24 0 0 0 0

0 0 0 6 12 18 24 30 24 18 12 0 0 0 0

0 0 0 24 30 18 24 12 0 30 30 0 0 0 0

0 0 0 36 36 42 42 24 30 18 36 0 0 0 0

0 0 0 12 18 24 30 36 18 24 30 0 0 0 0

0 0 0 12 0 18 0 24 0 12 6 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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,5)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 12 12 12 16 16 16 20 0 0 0

0 0 0 0 8 12 16 20 24 8 12 16 0 0 0

0 0 0 0 4 8 12 16 20 16 12 8 0 0 0

0 0 0 0 16 20 12 16 8 0 20 20 0 0 0

0 0 0 0 24 24 28 28 16 20 12 24 0 0 0

0 0 0 0 8 12 16 20 24 12 16 20 0 0 0

0 0 0 0 8 0 12 0 16 0 8 4 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 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 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,6)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 15 15 15 20 20 20 25 0 0

0 0 0 0 0 10 15 20 25 30 10 15 20 0 0

0 0 0 0 0 5 10 15 20 25 20 15 10 0 0

0 0 0 0 0 20 25 15 20 10 0 25 25 0 0

0 0 0 0 0 30 30 35 35 20 25 15 30 0 0

0 0 0 0 0 10 15 20 25 30 15 20 25 0 0

0 0 0 0 0 10 0 15 0 20 0 10 5 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 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 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,7)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 18 18 18 24 24 24 30 0

0 0 0 0 0 0 12 18 24 30 36 12 18 24 0

0 0 0 0 0 0 6 12 18 24 30 24 18 12 0

0 0 0 0 0 0 24 30 18 24 12 0 30 30 0

0 0 0 0 0 0 36 36 42 42 24 30 18 36 0

0 0 0 0 0 0 12 18 24 30 36 18 24 30 0

0 0 0 0 0 0 12 0 18 0 24 0 12 6 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 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 0 0 0 0 0 0 0 0 0 0 0

h\*x(5,8)

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 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 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 21 21 21 28 28 28 35

0 0 0 0 0 0 0 14 21 28 35 42 14 21 28

0 0 0 0 0 0 0 7 14 21 28 35 28 21 14

0 0 0 0 0 0 0 28 35 21 28 14 0 35 35

0 0 0 0 0 0 0 42 42 49 49 28 35 21 42

0 0 0 0 0 0 0 14 21 28 35 42 21 28 35

0 0 0 0 0 0 0 14 0 21 0 28 0 14 7

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 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 0 0 0 0 0 0 0 0 0 0

h\*x(4,1)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(4,2)

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 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 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

0 0 6 6 6 8 8 8 10 0 0 0 0 0 0

0 4 6 8 10 12 4 6 8 0 0 0 0 0 0

0 2 4 6 8 10 8 6 4 0 0 0 0 0 0

0 8 10 6 8 4 0 10 10 0 0 0 0 0 0

0 12 12 14 14 8 10 6 12 0 0 0 0 0 0

0 4 6 8 10 12 6 8 10 0 0 0 0 0 0

0 4 0 6 0 8 0 4 2 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 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 0

h\*x(4,3)

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 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 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

0 0 0 9 9 9 12 12 12 15 0 0 0 0 0

0 0 6 9 12 15 18 6 9 12 0 0 0 0 0

0 0 3 6 9 12 15 12 9 6 0 0 0 0 0

0 0 12 15 9 12 6 0 15 15 0 0 0 0 0

0 0 18 18 21 21 12 15 9 18 0 0 0 0 0

0 0 6 9 12 15 18 9 12 15 0 0 0 0 0

0 0 6 0 9 0 12 0 6 3 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 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

h\*x(4,4)

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 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 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

0 0 0 0 12 12 12 16 16 16 20 0 0 0 0

0 0 0 8 12 16 20 24 8 12 16 0 0 0 0

0 0 0 4 8 12 16 20 16 12 8 0 0 0 0

0 0 0 16 20 12 16 8 0 20 20 0 0 0 0

0 0 0 24 24 28 28 16 20 12 24 0 0 0 0

0 0 0 8 12 16 20 24 12 16 20 0 0 0 0

0 0 0 8 0 12 0 16 0 8 4 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 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(4,5)

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 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 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

0 0 0 0 0 15 15 15 20 20 20 25 0 0 0

0 0 0 0 10 15 20 25 30 10 15 20 0 0 0

0 0 0 0 5 10 15 20 25 20 15 10 0 0 0

0 0 0 0 20 25 15 20 10 0 25 25 0 0 0

0 0 0 0 30 30 35 35 20 25 15 30 0 0 0

0 0 0 0 10 15 20 25 30 15 20 25 0 0 0

0 0 0 0 10 0 15 0 20 0 10 5 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 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(4,6)

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 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 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

0 0 0 0 0 0 9 9 9 12 12 12 15 0 0

0 0 0 0 0 6 9 12 15 18 6 9 12 0 0

0 0 0 0 0 3 6 9 12 15 12 9 6 0 0

0 0 0 0 0 12 15 9 12 6 0 15 15 0 0

0 0 0 0 0 18 18 21 21 12 15 9 18 0 0

0 0 0 0 0 6 9 12 15 18 9 12 15 0 0

0 0 0 0 0 6 0 9 0 12 0 6 3 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 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(4,7)

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 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 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

0 0 0 0 0 0 0 15 15 15 20 20 20 25 0

0 0 0 0 0 0 10 15 20 25 30 10 15 20 0

0 0 0 0 0 0 5 10 15 20 25 20 15 10 0

0 0 0 0 0 0 20 25 15 20 10 0 25 25 0

0 0 0 0 0 0 30 30 35 35 20 25 15 30 0

0 0 0 0 0 0 10 15 20 25 30 15 20 25 0

0 0 0 0 0 0 10 0 15 0 20 0 10 5 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 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(4,8)

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 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 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

0 0 0 0 0 0 0 0 6 6 6 8 8 8 10

0 0 0 0 0 0 0 4 6 8 10 12 4 6 8

0 0 0 0 0 0 0 2 4 6 8 10 8 6 4

0 0 0 0 0 0 0 8 10 6 8 4 0 10 10

0 0 0 0 0 0 0 12 12 14 14 8 10 6 12

0 0 0 0 0 0 0 4 6 8 10 12 6 8 10

0 0 0 0 0 0 0 4 0 6 0 8 0 4 2

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(3,1)

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 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 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

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 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 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

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 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 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

h\*x(3,2)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(3,3)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 -3 -3 -3 -4 -4 -4 -5 0 0 0 0 0

0 0 -2 -3 -4 -5 -6 -2 -3 -4 0 0 0 0 0

0 0 -1 -2 -3 -4 -5 -4 -3 -2 0 0 0 0 0

0 0 -4 -5 -3 -4 -2 0 -5 -5 0 0 0 0 0

0 0 -6 -6 -7 -7 -4 -5 -3 -6 0 0 0 0 0

0 0 -2 -3 -4 -5 -6 -3 -4 -5 0 0 0 0 0

0 0 -2 0 -3 0 -4 0 -2 -1 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 0 0 0 0 0 0 0 0 0 0

h\*x(3,4)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 -6 -6 -6 -8 -8 -8-10 0 0 0 0

0 0 0 -4 -6 -8-10-12 -4 -6 -8 0 0 0 0

0 0 0 -2 -4 -6 -8-10 -8 -6 -4 0 0 0 0

0 0 0 -8-10 -6 -8 -4 0-10-10 0 0 0 0

0 0 0-12-12-14-14 -8-10 -6-12 0 0 0 0

0 0 0 -4 -6 -8-10-12 -6 -8-10 0 0 0 0

0 0 0 -4 0 -6 0 -8 0 -4 -2 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 0 0 0 0 0 0 0 0 0

h\*x(3,5)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 -3 -3 -3 -4 -4 -4 -5 0 0 0

0 0 0 0 -2 -3 -4 -5 -6 -2 -3 -4 0 0 0

0 0 0 0 -1 -2 -3 -4 -5 -4 -3 -2 0 0 0

0 0 0 0 -4 -5 -3 -4 -2 0 -5 -5 0 0 0

0 0 0 0 -6 -6 -7 -7 -4 -5 -3 -6 0 0 0

0 0 0 0 -2 -3 -4 -5 -6 -3 -4 -5 0 0 0

0 0 0 0 -2 0 -3 0 -4 0 -2 -1 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 0 0 0 0 0 0 0 0

h\*x(3,6)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 15 15 15 20 20 20 25 0 0

0 0 0 0 0 10 15 20 25 30 10 15 20 0 0

0 0 0 0 0 5 10 15 20 25 20 15 10 0 0

0 0 0 0 0 20 25 15 20 10 0 25 25 0 0

0 0 0 0 0 30 30 35 35 20 25 15 30 0 0

0 0 0 0 0 10 15 20 25 30 15 20 25 0 0

0 0 0 0 0 10 0 15 0 20 0 10 5 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 0 0 0 0 0 0 0

h\*x(3,7)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 12 12 12 16 16 16 20 0

0 0 0 0 0 0 8 12 16 20 24 8 12 16 0

0 0 0 0 0 0 4 8 12 16 20 16 12 8 0

0 0 0 0 0 0 16 20 12 16 8 0 20 20 0

0 0 0 0 0 0 24 24 28 28 16 20 12 24 0

0 0 0 0 0 0 8 12 16 20 24 12 16 20 0

0 0 0 0 0 0 8 0 12 0 16 0 8 4 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 0 0 0 0 0 0

h\*x(3,8)

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 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 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

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 9 9 9 12 12 12 15

0 0 0 0 0 0 0 6 9 12 15 18 6 9 12

0 0 0 0 0 0 0 3 6 9 12 15 12 9 6

0 0 0 0 0 0 0 12 15 9 12 6 0 15 15

0 0 0 0 0 0 0 18 18 21 21 12 15 9 18

0 0 0 0 0 0 0 6 9 12 15 18 9 12 15

0 0 0 0 0 0 0 6 0 9 0 12 0 6 3

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 0 0 0 0 0

h\*x(2,1)

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 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 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,2)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 6 6 6 8 8 8 10 0 0 0 0 0 0

0 4 6 8 10 12 4 6 8 0 0 0 0 0 0

0 2 4 6 8 10 8 6 4 0 0 0 0 0 0

0 8 10 6 8 4 0 10 10 0 0 0 0 0 0

0 12 12 14 14 8 10 6 12 0 0 0 0 0 0

0 4 6 8 10 12 6 8 10 0 0 0 0 0 0

0 4 0 6 0 8 0 4 2 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,3)

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 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 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

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 0 0 0 0 0

0 0 0 9 9 9 12 12 12 15 0 0 0 0 0

0 0 6 9 12 15 18 6 9 12 0 0 0 0 0

0 0 3 6 9 12 15 12 9 6 0 0 0 0 0

0 0 12 15 9 12 6 0 15 15 0 0 0 0 0

0 0 18 18 21 21 12 15 9 18 0 0 0 0 0

0 0 6 9 12 15 18 9 12 15 0 0 0 0 0

0 0 6 0 9 0 12 0 6 3 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,4)

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 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 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

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 0 0 0 0 0

0 0 0 0 12 12 12 16 16 16 20 0 0 0 0

0 0 0 8 12 16 20 24 8 12 16 0 0 0 0

0 0 0 4 8 12 16 20 16 12 8 0 0 0 0

0 0 0 16 20 12 16 8 0 20 20 0 0 0 0

0 0 0 24 24 28 28 16 20 12 24 0 0 0 0

0 0 0 8 12 16 20 24 12 16 20 0 0 0 0

0 0 0 8 0 12 0 16 0 8 4 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,5)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 9 9 9 12 12 12 15 0 0 0

0 0 0 0 6 9 12 15 18 6 9 12 0 0 0

0 0 0 0 3 6 9 12 15 12 9 6 0 0 0

0 0 0 0 12 15 9 12 6 0 15 15 0 0 0

0 0 0 0 18 18 21 21 12 15 9 18 0 0 0

0 0 0 0 6 9 12 15 18 9 12 15 0 0 0

0 0 0 0 6 0 9 0 12 0 6 3 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,6)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 15 15 15 20 20 20 25 0 0

0 0 0 0 0 10 15 20 25 30 10 15 20 0 0

0 0 0 0 0 5 10 15 20 25 20 15 10 0 0

0 0 0 0 0 20 25 15 20 10 0 25 25 0 0

0 0 0 0 0 30 30 35 35 20 25 15 30 0 0

0 0 0 0 0 10 15 20 25 30 15 20 25 0 0

0 0 0 0 0 10 0 15 0 20 0 10 5 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,7)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 18 18 18 24 24 24 30 0

0 0 0 0 0 0 12 18 24 30 36 12 18 24 0

0 0 0 0 0 0 6 12 18 24 30 24 18 12 0

0 0 0 0 0 0 24 30 18 24 12 0 30 30 0

0 0 0 0 0 0 36 36 42 42 24 30 18 36 0

0 0 0 0 0 0 12 18 24 30 36 18 24 30 0

0 0 0 0 0 0 12 0 18 0 24 0 12 6 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(2,8)

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 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 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

h\*x(1,1)

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 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 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 6 6 6 8 8 8 10 0 0 0 0 0 0 0

4 6 8 10 12 4 6 8 0 0 0 0 0 0 0

2 4 6 8 10 8 6 4 0 0 0 0 0 0 0

8 10 6 8 4 0 10 10 0 0 0 0 0 0 0

12 12 14 14 8 10 6 12 0 0 0 0 0 0 0

4 6 8 10 12 6 8 10 0 0 0 0 0 0 0

4 0 6 0 8 0 4 2 0 0 0 0 0 0 0

h\*x(1,2)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 9 9 9 12 12 12 15 0 0 0 0 0 0

0 6 9 12 15 18 6 9 12 0 0 0 0 0 0

0 3 6 9 12 15 12 9 6 0 0 0 0 0 0

0 12 15 9 12 6 0 15 15 0 0 0 0 0 0

0 18 18 21 21 12 15 9 18 0 0 0 0 0 0

0 6 9 12 15 18 9 12 15 0 0 0 0 0 0

0 6 0 9 0 12 0 6 3 0 0 0 0 0 0

h\*x(1,3)

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 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 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

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 12 12 12 16 16 16 20 0 0 0 0 0

0 0 8 12 16 20 24 8 12 16 0 0 0 0 0

0 0 4 8 12 16 20 16 12 8 0 0 0 0 0

0 0 16 20 12 16 8 0 20 20 0 0 0 0 0

0 0 24 24 28 28 16 20 12 24 0 0 0 0 0

0 0 8 12 16 20 24 12 16 20 0 0 0 0 0

0 0 8 0 12 0 16 0 8 4 0 0 0 0 0

h\*x(1,4)

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 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 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

0 0 0 0 6 6 6 8 8 8 10 0 0 0 0

0 0 0 4 6 8 10 12 4 6 8 0 0 0 0

0 0 0 2 4 6 8 10 8 6 4 0 0 0 0

0 0 0 8 10 6 8 4 0 10 10 0 0 0 0

0 0 0 12 12 14 14 8 10 6 12 0 0 0 0

0 0 0 4 6 8 10 12 6 8 10 0 0 0 0

0 0 0 4 0 6 0 8 0 4 2 0 0 0 0

h\*x(1,5)

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 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 15 15 15 20 20 20 25 0 0 0

0 0 0 0 10 15 20 25 30 10 15 20 0 0 0

0 0 0 0 5 10 15 20 25 20 15 10 0 0 0

0 0 0 0 20 25 15 20 10 0 25 25 0 0 0

0 0 0 0 30 30 35 35 20 25 15 30 0 0 0

0 0 0 0 10 15 20 25 30 15 20 25 0 0 0

0 0 0 0 10 0 15 0 20 0 10 5 0 0 0

h\*x(1,6)

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 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 0 0 0 0 0 0 0 0 0 0

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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 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 0 9 9 9 12 12 12 15 0 0

0 0 0 0 0 6 9 12 15 18 6 9 12 0 0

0 0 0 0 0 3 6 9 12 15 12 9 6 0 0

0 0 0 0 0 12 15 9 12 6 0 15 15 0 0

0 0 0 0 0 18 18 21 21 12 15 9 18 0 0

0 0 0 0 0 6 9 12 15 18 9 12 15 0 0

0 0 0 0 0 6 0 9 0 12 0 6 3 0 0

h\*x(1,7)

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 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 0 0 0 0 0 0 0 0 0 0

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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 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 0 0 18 18 18 24 24 24 30 0

0 0 0 0 0 0 12 18 24 30 36 12 18 24 0

0 0 0 0 0 0 6 12 18 24 30 24 18 12 0

0 0 0 0 0 0 24 30 18 24 12 0 30 30 0

0 0 0 0 0 0 36 36 42 42 24 30 18 36 0

0 0 0 0 0 0 12 18 24 30 36 18 24 30 0

0 0 0 0 0 0 12 0 18 0 24 0 12 6 0

h\*x(1,8)

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 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 0 0 0 0 0 0 0 0 0 0

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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 0 0 0 0 0

Выходной сигнал y(n1,n2):

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 12 21 33 43 58 77 101 97 91 79 76 61 42 15

8 18 42 66 99 121 158 191 208 193 166 133 101 70 27

4 29 55 91 130 185 216 262 257 240 205 170 105 80 18

24 60 104 133 192 232 310 372 378 312 293 233 187 146 56

34 83 149 215 296 372 434 537 509 455 396 316 226 175 71

27 79 134 203 290 356 474 556 545 490 441 353 288 202 70

44 85 138 177 281 325 465 578 556 527 441 363 260 221 69

26 88 133 231 304 392 493 586 583 522 479 354 273 204 61

18 49 103 150 263 319 459 494 531 422 391 289 228 171 62

8 29 53 98 131 236 295 375 358 344 282 230 194 128 35

8 38 71 108 142 190 257 268 282 242 203 167 156 107 17

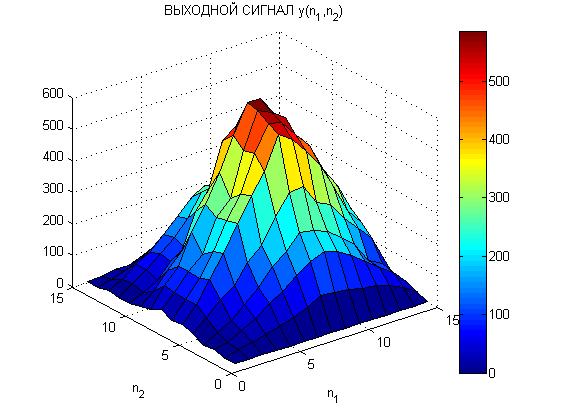
12 34 66 92 134 178 224 248 230 233 161 143 98 76 3

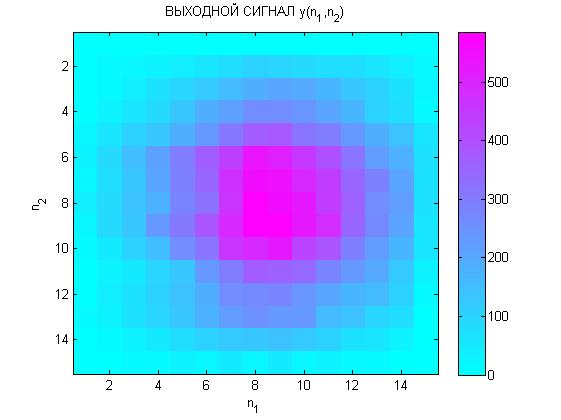
4 16 31 52 74 103 125 136 144 122 109 68 56 36 0

4 6 14 13 30 24 47 25 49 20 36 11 15 6 0

Выходной сигнал, полученный способом свёртки, совпадает с выходным сигналом, полученным способом сдвига и взвешивания.

***Визуализиция выходного сигнала:***



****