```
%HW2-Prb2
%Navneet Singh(nsingh1@andrew.cmu.edu)

clc       %clear screen
clear all % clearing all stored variables
close all %close previous plots

%Defining A matrix
A =[3, 2, 2, 1; 2, 3, 1, 2; 2, 1, 2, 0; 1, 2, 0, 5];
[eigenvector, eigenvalues] = eig(A);

%Part A

%Printing eigenvalues and eigen vector.
fprintf('eigen values=%4.3f\n',diag(eigenvalues));
for i=1:size(eigenvector,2)
 fprintf('norm %d: %d\n',i,round(norm(eigenvector(:,i)),2))

end
%Matlab uses Euclidean norm to calculate eigen vectors

% Part B
%Symbolic eigen values and eigenvectors
[Eigenvectors,Eigenvalues] = eig(sym(A))

%Part C
%Defining x matrix
x=[1 0 0 0]';

tolerance = 2;
i=1;
%we will calculate tolerance as difference between norms of
 consecutive
%vectors
while(tolerance>10^-6)
eigvctr=A*x;

eigvctr = eigvctr/max(eigvctr);
tolerance = norm(eigvctr)-norm(x);

x=eigvctr;

i=i+1;

end
fprintf('Eigenvalues using power method')
eigvctr

eigen values=0.304
eigen values=1.072
eigen values=4.052
eigen values=7.572
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norm 1: 1
norm 2: 1
norm 3: 1
norm 4: 1

Eigenvectors =

[ 835/12 - (25*(((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) - 13/4)^2)/3 - (2*(((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) - 13/4)^3)/3 - (83*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2))/(18*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) - (83*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/(18*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(1/6)),
 835/12 - (25*(13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
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11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/4)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)))^2)/3 + (2*(13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
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 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
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 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) + 835/12]
[        (20*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + (25*(((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
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 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
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 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
```

```
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 13/4)^3/3 + (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 107/3,        (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)) + (25*(13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/4)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)))^2)/6 - (13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/4)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)))^3/3 - (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
```

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+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 107/3,        (25*(((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^2)/6 - (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - (((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^3/3 + (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 107/3,        (25*(((393*((3^(1/2)*56482^(1/2)*1i)/3
```

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 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) + 13/4)^2)/6 - (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) - (((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) + 13/4)^3/3 - (20*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2))/(9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) - 107/3]
[        (23*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + (13*(((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
```

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+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 13/4)^2)/2 + (((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 13/4)^3/2 + (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 223/4,        (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)) + (13*(13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/4)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
```

```
11807/27)^(1/6)))^2)/2 - (13/4 + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/4)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/6)))^3/2 - (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 223/4,         (13*(((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^2)/2 - (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - (((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
```

```
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^3/2 + (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) - 223/4,        (13*(((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^2)/2 - (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) - (((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)) + ((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
+ 11807)^(1/2))/8)^(1/2)/(6*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/4)) + 13/4)^3/2 - (23*((393*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
```

```
 + 535)^(1/2))/2 - 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(3^(1/2)*56482^(1/2)*9i
 + 11807)^(1/2))/8)^(1/2))/(6*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/6)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
 + 535)^(1/4)) - 223/4]
[
```

```
1,
```

1,

1,

```
                                                                1]

Eigenvalues =

[ 13/4 - (- 535*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) + (393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2))/2 - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(11807
 + 3^(1/2)*56482^(1/2)*9i)^(1/2))/8)^(1/2)/(6*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)*((393*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/3))/4 + 9*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(2/3) + 535)^(1/4)) -
 ((393*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(1/3))/4 +
 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3) + 535)^(1/2)/
(6*(11807/27 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)),

                                0,

                                                                0,
```

```
                                                    0]
[

                0, 13/4 + (- 535*((393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) + (393*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2))/2 - 9*((3^(1/2)*56482^(1/2)*1i)/3
 + 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) - (363*2^(1/2)*6^(1/2)*(11807
 + 3^(1/2)*56482^(1/2)*9i)^(1/2))/8)^(1/2)/(6*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)*((393*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/3))/4 + 9*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(2/3) + 535)^(1/4)) -
 ((393*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(1/3))/4 +
 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3) + 535)^(1/2)/
(6*(11807/27 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)),

                          0,
```

```
                                                                    0]
[

                                                          0,

                                  0, ((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2)/(6*(11807/27 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6))
- (- 535*((393*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(1/3))/4
+ 9*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)
+ 535)^(1/2) + (393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2))/2 - 9*((3^(1/2)*56482^(1/2)*1i)/3
+ 11807/27)^(2/3)*((393*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
11807/27)^(2/3) + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(11807
+ 3^(1/2)*56482^(1/2)*9i)^(1/2))/8)^(1/2)/(6*(11807/27
+ (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)*((393*(11807/27 +
(3^(1/2)*56482^(1/2)*1i)/3)^(1/3))/4 + 9*(11807/27 +
(3^(1/2)*56482^(1/2)*1i)/3)^(2/3) + 535)^(1/4)) + 13/4,
```

0]

[

0,

0,

0, ((393((3^(1/2)*56482^(1/2)*1i)/3 +*
11807/27)^(1/3))/4 + 9((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)*
+ 535)^(1/2)/(6(11807/27 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6))*
+ (- 535((393*((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(1/3))/4*
+ 9((3^(1/2)*56482^(1/2)*1i)/3 + 11807/27)^(2/3)*
+ 535)^(1/2) + (393((3^(1/2)*56482^(1/2)*1i)/3 +*
11807/27)^(1/3)((393*((3^(1/2)*56482^(1/2)*1i)/3 +*
11807/27)^(1/3))/4 + 9((3^(1/2)*56482^(1/2)*1i)/3 +*
11807/27)^(2/3) + 535)^(1/2))/2 - 9((3^(1/2)*56482^(1/2)*1i)/3*
+ 11807/27)^(2/3)((393*((3^(1/2)*56482^(1/2)*1i)/3 +*

```
 11807/27)^(1/3))/4 + 9*((3^(1/2)*56482^(1/2)*1i)/3 +
 11807/27)^(2/3) + 535)^(1/2) + (363*2^(1/2)*6^(1/2)*(11807
 + 3^(1/2)*56482^(1/2)*9i)^(1/2))/8)^(1/2)/(6*(11807/27
 + (3^(1/2)*56482^(1/2)*1i)/3)^(1/6)*((393*(11807/27 +
 (3^(1/2)*56482^(1/2)*1i)/3)^(1/3))/4 + 9*(11807/27 +
 (3^(1/2)*56482^(1/2)*1i)/3)^(2/3) + 535)^(1/4)) + 13/4]

Eigenvalues using power method
eigvctr =

    0.8783
    0.9375
    0.5075
    1.0000
```

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