The eigenvalue of largest magnitude is -8.16652, so try inverse iteration with p=8 to look for the largest positive eigenvalue

MATRIX A

STARTING VECTOR

60.140, -16.70, -18.30, 3.3200, -48.60	1.0000
154.80, -37.56, -62.80, 25.400, -131.7	.00000
-174.4, 51.900, 65.340, -15.10, 149.70	.00000
-185.7, 51.600, 73.300, -23.46, 157.10	.00000
75.600, -28.10, -20.10, -4.140, -61.26	.00000

Inverse iteration
The p value is 8
Number of decimal places = 6

Iter.	Eigenvector	Alpha
1	-.313936, -.854320, .9389657, 1.000000, -.328333,	-132.568

Eigenvalue nearest to 8 has value of 8.036632 = 8.03663 correct to 5 decimal places
Found in 4 iterations.
Corresponding eigenvector
(-.315509, -.853431, .9388798, 1.000000, -.330211)
****

Now try $p = \frac{1}{2}(8+4) = 6$ to find any +ve eigenvalue between 4 and 8.

MATRIX A

STARTING VECTOR

60.140, -16.70, -18.30, 3.3200, -48.60	1.0000
154.80, -37.56, -62.80, 25.400, -131.7	.00000
-174.4, 51.900, 65.340, -15.10, 149.70	.00000
-185.7, 51.600, 73.300, -23.46, 157.10	.00000
75.600, -28.10, -20.10, -4.140, -61.26	.00000

Inverse iteration
The p value is 6
Number of decimal places = 6

Iter.	Eigenvector	Alpha
1	-.381324, -.773672, .9408998, 1.000000, -.448111,	6.443114

Eigenvalue nearest to 6 has value of 4.736809 = 4.73681 correct to 5 decimal places
Found in 30 iterations.
Corresponding eigenvector
(-.316637, -.779154, .9555048, 1.000000, -.384703)
****

You have got your eigenvalues/vectors in the end. You are still not clear on what ranges eigenvalues can exist in. Refer to UNIT 21 and examples in the Black Badge Press Book if you have got it. The most common approach here would be to use the LR Method to get approx values and then use those for 'p' to and inverse iteration for the more accurate values. You have lost marks for inaccuracy - see comments.

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