Question 1:

L = 0.3333 0.4000 1.0000

1.0000 0 0

0.3333 1.0000 0

U = 3.0000 -1.0000 1.0000

0 3.3333 -0.3333

0 0 2.8000

P = 1 0 0

0 1 0

0 0 1

Question 2:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| n | ||x – z|| / ||x|| | P = ||Hz – b|| / ||b|| | Q = ||H||\*||H||-1 | P\*Q |
| 8 | 0.9843 | 1.3534e-16 | 1.5258e+10 | 2.0649e-06 |
| 12 | 1.4143 | 9.2750e-17 | 1.6212e+16 | 1.5036 |
| 16 | 559.1190 | 2.1686e-15 | 4.8875e+17 | 1.0599e+03 |