

16/ENG06/035

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Mechanical engineering

```
commandwindow
clc
clear
A = [2,3,7,9,4;3,7,9,12,5;4,8,5,6,9;5,9,2,4,5;6,2,3,7,8]
Afutu = det (A)
Afutu = transpose (A)
R = inv (A)
B = [0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,16,-10]
Q = [4;2;6;4]
P = inv (B)*Q
```

A =

| | | | | |
|---|---|---|----|---|
| 2 | 3 | 7 | 9 | 4 |
| 3 | 7 | 9 | 12 | 5 |
| 4 | 8 | 5 | 6 | 9 |
| 5 | 9 | 2 | 4 | 5 |
| 6 | 2 | 3 | 7 | 8 |

Afutu =

-765.0000

Afutu =

| | | | | |
|---|----|---|---|---|
| 2 | 3 | 4 | 5 | 6 |
| 3 | 7 | 8 | 9 | 2 |
| 7 | 9 | 5 | 2 | 3 |
| 9 | 12 | 6 | 4 | 7 |
| 4 | 5 | 9 | 5 | 8 |

R =

| | | | | |
|---------|---------|---------|---------|---------|
| 1.8915 | -1.4026 | -0.3124 | 0.7843 | -0.2078 |
| -0.4379 | 0.3268 | 0.0523 | -0.0392 | -0.0196 |
| 2.5725 | -1.8392 | -0.0863 | 0.7647 | -0.5176 |
| -1.8876 | 1.4654 | 0.0105 | -0.6078 | 0.3961 |
| -0.6222 | 0.3778 | 0.2444 | -0.3333 | 0.1333 |

B =

| | | | |
|----|-----|---|----|
| 0 | 10 | 4 | -2 |
| -3 | -17 | 1 | 2 |
| 1 | 1 | 1 | 0 |

8 -34 16 -10

Q =

4
2
6
4

P =

2.5714
0.2857
3.1429
5.7143