

*Problem 5*

To obtain the matrix A:

```
>> A = [ 3 7 -4 12;-5 9 10 2;6 13 8 11;15 5 4 1]
```

(a) >> v = A(:,2)

(b) >> w = A(2,:)

*Problem 20*

The following script will find the values for  $R$ ,  $L$  to minimize cost and the minimum *cost* as well.

```
% Script to solve Problem 20 Page 129
clear;
Rmin = 15; % The minimum value for R
Rmax = 25; % The maximum value for R
% Generate some values for R with 0.01 resolution
R = Rmin:0.01:Rmax;
% Generate corresponding L values
L = 1600./(2*R) - pi*R/4;
% Generate cost vector
cost = 30*2*(R+L) + 40*pi*R;
% Plot the cost vs. R
plot(R,cost); xlabel('R[ft]');ylabel('Cost[$]');grid on;
% Determine the min cost value
[value,i] = min(cost)
% Determine the R value for min cost
R(i)
% Determine the L value for min cost
L(i)
```

*Problem 24*

```
% Problem 24 page 130 clear;
RL = 10:5:30;
for RS = 10:5:30
r = (RS + RL).^2;
r = RL./r;
disp('For RS=');
disp(RS);
[y,i] = max(r);
disp('Max r is given by RL=');
disp(RL(i));
end
```

*Problem 27*

```
% Problem 27 page 132 clear;
A = [11 5;-9 -4]
B = [-7 -8;6 2]
A*B
B*A
```