

Problem_8_b

December 10, 2021

1 Problem_8_B

```
[1]: WA = [1 -1 0 0 0 0;  
0 0 0 1 -1 0;  
1 0 -1 0 0 0;  
0 0 0 1 0 -1;  
1 0 0 0 0 0;  
0 0 0 1 0 0;  
0 1 0 0 0 0;  
0 0 0 0 1 0;  
0 0 1 0 0 0;  
0 0 0 0 0 1;  
0 0 1 0 0 0;  
0 0 0 0 0 1;  
0 1 0 0 0 0;  
0 0 0 0 1 0;  
]
```

```
[1]: 14×6 Matrix{Int64}:  
 1  -1   0   0   0   0  
 0   0   0   1  -1   0  
 1   0  -1   0   0   0  
 0   0   0   1   0  -1  
 1   0   0   0   0   0  
 0   0   0   1   0   0  
 0   1   0   0   0   0  
 0   0   0   0   1   0  
 0   0   1   0   0   0  
 0   0   0   0   0   1  
 0   0   1   0   0   0  
 0   0   0   0   0   1  
 0   1   0   0   0   0  
 0   0   0   0   1   0
```

```
[2]: wb = [ 0,0,0,0,-1,0,0.5,1,0,-1,1,0.5,1,0.5]
```

[2]: 14-element Vector{Float64}:

```
0.0
0.0
0.0
0.0
-1.0
0.0
0.5
1.0
0.0
-1.0
1.0
0.5
1.0
0.5
```

[3]: WA_bar = [1 -1 0;

```
1 0 -1;
1 0 0;
0 1 0;
0 0 1;
0 0 1;
0 1 0]
```

[3]: 7×3 Matrix{Int64}:

```
1  -1  0
1   0 -1
1   0  0
0   1  0
0   0  1
0   0  1
0   1  0
```

[4]: wb_bar = [0,0,-1,0.5,0,1,1]

```
WA_tilde = [1 -1 0;
1 0 -1;
1 0 0;
0 1 0;
0 0 1;
0 0 1;
0 1 0]
wb_tilde = [0,0,0,1,-1,0.5,0.5]
```

[4]: 7-element Vector{Float64}:

```
0.0
0.0
0.0
```

```
1.0  
-1.0  
0.5  
0.5
```

```
[5]: WX = WA\wb
```

```
[5]: 6-element Vector{Float64}:  
-0.07142857142857142  
0.4761904761904762  
0.30952380952380953  
0.14285714285714285  
0.5476190476190477  
-0.11904761904761908
```

```
[6]: WX_bar = WA_bar\wb_bar
```

```
[6]: 3-element Vector{Float64}:  
-0.07142857142857145  
0.4761904761904762  
0.3095238095238095
```

```
[7]: WX_tilde = WA_tilde\wb_tilde
```

```
[7]: 3-element Vector{Float64}:  
0.14285714285714285  
0.5476190476190477  
-0.11904761904761908
```