

# HW 1 ANSWER KEY EE8725

|    |      |      |      |       |          |          |    |    |    |
|----|------|------|------|-------|----------|----------|----|----|----|
| L= | 1    | 0    | 0    | 0     | 0        | 0        | 0  | 0  | 0  |
|    | 0    | 1    | 0    | 0     | 0        | 0        | 0  | 0  | 0  |
|    | 0    | 0    | 1    | 0     | 0        | 0        | 0  | 0  | 0  |
|    | -0.5 | 0    | -0.5 | 1     | 0        | 0        | 0  | 0  | 0  |
|    | 0    | -0.5 | 0    | 0     | 1        | 0        | 0  | 0  | 0  |
|    | 0    | 0    | -0.5 | -0.25 | 0        | 1        | 0  | 0  | 0  |
|    | 0    | 0    | 0    | 0     | 0        | 0        | 1  | 0  | 0  |
|    | 0    | 0    | 0    | 0     | -0.66667 | 0        | -1 | 1  | 0  |
|    | 0    | -0.5 | 0    | -0.5  | -0.33333 | 0.181818 | 0  | -1 | 1  |
|    | -0.5 | 0    | 0    | -0.25 | 0        | 0.818182 | 0  | 0  | -1 |

|    |   |   |   |   |     |       |        |        |   |
|----|---|---|---|---|-----|-------|--------|--------|---|
| D= | 2 | 0 | 0 | 0 | 0   | 0     | 0      | 0      | 0 |
|    | 0 | 2 | 0 | 0 | 0   | 0     | 0      | 0      | 0 |
|    | 0 | 0 | 2 | 0 | 0   | 0     | 0      | 0      | 0 |
|    | 0 | 0 | 0 | 2 | 0   | 0     | 0      | 0      | 0 |
|    | 0 | 0 | 0 | 0 | 1.5 | 0     | 0      | 0      | 0 |
|    | 0 | 0 | 0 | 0 | 0   | 1.375 | 0      | 0      | 0 |
|    | 0 | 0 | 0 | 0 | 0   | 0     | 1      | 0      | 0 |
|    | 0 | 0 | 0 | 0 | 0   | 0     | 0.3333 | 0      | 0 |
|    | 0 | 0 | 0 | 0 | 0   | 0     | 0      | 0.4545 | 0 |
|    | 0 | 0 | 0 | 0 | 0   | 0     | 0      | 0      | 2 |

[illegible]

Ans if there is a short at Bus #2

|     |     |
|-----|-----|
| V1  | 1.1 |
| V2  | 3.7 |
| V3  | 1.3 |
| V4  | 1.7 |
| V5  | 3.7 |
| V6  | 0.9 |
| V7  | 3.7 |
| V8  | 3.7 |
| V9  | 2.7 |
| V10 | 0.5 |

| INDEX | row | nur | column | y  | next |
|-------|-----|-----|--------|----|------|
|       | 1   | 1   | 4      | -1 | 2    |
|       | 2   | 3   | 10     | -1 | 0    |
|       | 3   | 5   | 5      | -1 | 4    |
|       | 4   | 7   | 9      | -1 | 0    |
|       | 5   | 10  | 4      | -1 | 6    |
|       | 6   | 14  | 6      | -1 | 0    |
|       | 7   | 15  | 1      | -1 | 8    |
|       | 8   | 17  | 3      | -1 | 9    |
|       | 9   | 19  | 9      | -1 | 0    |
| 10    |     |     | 2      | -1 | 11   |
| 11    |     |     | 8      | -1 | 0    |
| 12    |     |     | 3      | -1 | 13   |
| 13    |     |     | 10     | -1 | 0    |
| 14    |     |     | 8      | -1 | 0    |
| 15    |     |     | 5      | -1 | 16   |
| 16    |     |     | 7      | -1 | 0    |
| 17    |     |     | 2      | -1 | 18   |
| 18    |     |     | 4      | -1 | 0    |
| 19    |     |     | 1      | -1 | 20   |
| 20    |     |     | 6      | -1 | 0    |