**1a**

**2.1**

(a)

We have a non-zero element in rref and this indicates there is no solution for Ax=b. MATLAB’s approximation (A\b) yields the following solution.

Warning: Matrix is singular to working precision.

> In Solution\_2\_1 (line 4)

NaN

Inf

Inf

(b)

0.5000

0.5000

0.5000

(c)

0

-0.3333

0.3333

**3.1**

1. R4 is missing in the question diagram. Included it and solved.

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=

2.

=

It can be clearly seen that **T3** is independent of **f2**.

So, no matter how big or small **f2** is, **T3** cannot be changed.

3.

If T3 = 1000 then,

* f1 ≈ -316.9873

f2 can be anything.

**1b**

**2.1**

Refer to “*1/1b/Solution\_2\_1.m*” for code.

2.4455 -0.4558 -0.2476 -0.0588

10.6574 -1.4300 -1.2112 -0.2585

235.8636 -35.3400 -28.4804 -5.7000

81.1064 -17.0496 -6.5352 -1.6280

**2.2**

5.1036

14.8974

51.1443

-147.6006

**1c**

**1.3.1 - 1.3.5**

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**1d**

**1.4.1 - 1.4.3**

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