Test Cases: exercises 25, 26 of Section 3.4, page 142

25)

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D:\C++\Cramer's_Rule\cmake-build-debug\Cramer_s_Rule.exe
1. Solve a system of equations
2. Exit
Enter your choice:1
 Enter the number of equations:4
 Enter the equations (format: a1x1+a2x2+...+anxn=c):
3x1-2x2+9x3+4x4=35
-1x1+0x2-9x3-6x4=-17
0x1+0x2+3x3+1x4=5
2x1+2x2+0x3+8x4=-4
3x1 + -2x2 + 9x3 + 4x4 = 35
-1x1 + 0x2 + -9x3 + -6x4 = -17
0x1 + 0x2 + 3x3 + 1x4 = 5
2x1 + 2x2 + 0x3 + 8x4 = -4
Determinant of the coefficient matrix: 36
Matrix after replacing column 1 with constants:
   35   -2    9    4
  -17    0   -9   -6
    5    0    3    1
   -4    2    0    8
Determinant of the temporary matrix: 180
Solution for x1: 180 / 36 = 5
Matrix after replacing column 2 with constants:
    3   35    9    4
   -1  -17   -9   -6
    0    5    3    1
    2   -4    0    8
```

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Determinant of the temporary matrix: -108
Solution for x2: -108 / 36 = -3
Matrix after replacing column 3 with constants:
    3   -2   35    4
   -1    0  -17   -6
    0    0    5    1
    2    2   -4    8
Determinant of the temporary matrix: 72
Solution for x3: 72 / 36 = 2
Matrix after replacing column 4 with constants:
    3   -2    9   35
   -1    0   -9  -17
    0    0    3    5
    2    2    0   -4
Determinant of the temporary matrix: -36
Solution for x4: -36 / 36 = -1
The solution is:
x1 = 5
x2 = -3
x3 = 2
x4 = -1
1. Solve a system of equations
2. Exit
Enter your choice:2
 Exiting...
```

26)

```
D:\C++\Cramer's_Rule\cmake-build-debug\Cramer_s_Rule.exe
1. Solve a system of equations
2. Exit
Enter your choice:1
 Enter the number of equations:4
 Enter the equations (format: a1x1+a2x2+...+anxn=c):
-1x1-1x2+0x3+1x4=-8
3x1+5x2+5x3+0x4=24
0x1+0x2+2x3+1x4=-6
-2x1-3x2-3x3+0x4=-15
-1x1 + -1x2 + 0x3 + 1x4 = -8
3x1 + 5x2 + 5x3 + 0x4 = 24
0x1 + 0x2 + 2x3 + 1x4 = -6
-2x1 + -3x2 + -3x3 + 0x4 = -15
Determinant of the coefficient matrix: 1
Matrix after replacing column 1 with constants:
   -8   -1    0    1
   24    5    5    0
   -6    0    2    1
  -15   -3   -3    0
Determinant of the temporary matrix: 3
Solution for x1: 3 / 1 = 3
Matrix after replacing column 2 with constants:
   -1   -8    0    1
    3   24    5    0
    0   -6    2    1
   -2  -15   -3    0
```

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Determinant of the temporary matrix: 7
Solution for x2: 7 / 1 = 7
Matrix after replacing column 3 with constants:
   -1   -1   -8    1
    3    5   24    0
    0    0   -6    1
   -2   -3  -15    0
Determinant of the temporary matrix: -4
Solution for x3: -4 / 1 = -4
Matrix after replacing column 4 with constants:
   -1   -1    0   -8
    3    5    5   24
    0    0    2   -6
   -2   -3   -3  -15
Determinant of the temporary matrix: 2
Solution for x4: 2 / 1 = 2
The solution is:
x1 = 3
x2 = 7
x3 = -4
x4 = 2
1. Solve a system of equations
2. Exit
Enter your choice:2
 Exiting...
```