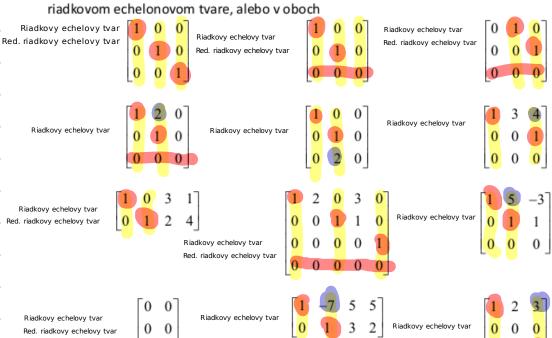


| b) | [0 | - \ | -5 | $\int O$ | R3+2, | ſΛ 3 | 8 - | 3 |
|----|----|-----|----|------------|-------|-----------------|------|----|
| | 12 | - C | 3 | 2 | 7 | 1 - | 6 3 | 2/ |
| | 1 | 4 | -3 | <u>ح</u> ر | | $\int \sqrt{1}$ | 4 -3 | 2] |

 Určte, či nasledovné matice sú v riadkovom echelonovom tvare, alebo v redukovanom riadkovom echelonovom tvare, alebo v oboch



To be in row echelon form, a matrix must have the following properties:

ts I. If a row does not consist entirely of Zeros, then the first nonzero number in the row is a l.

- 2. All Zero rows are at the bottom of the matrix.
- 3. In any two successive rows that do not consist entirely of Zeros, the leading I in the lower row occurs farther to the right than the leading I in the higher row.

A Row echelon form is not unique

For reduced row echelon form:

- 4. Each column containing a leading I has zeros in all its other entries.
- * Reduced row echelon form is unique

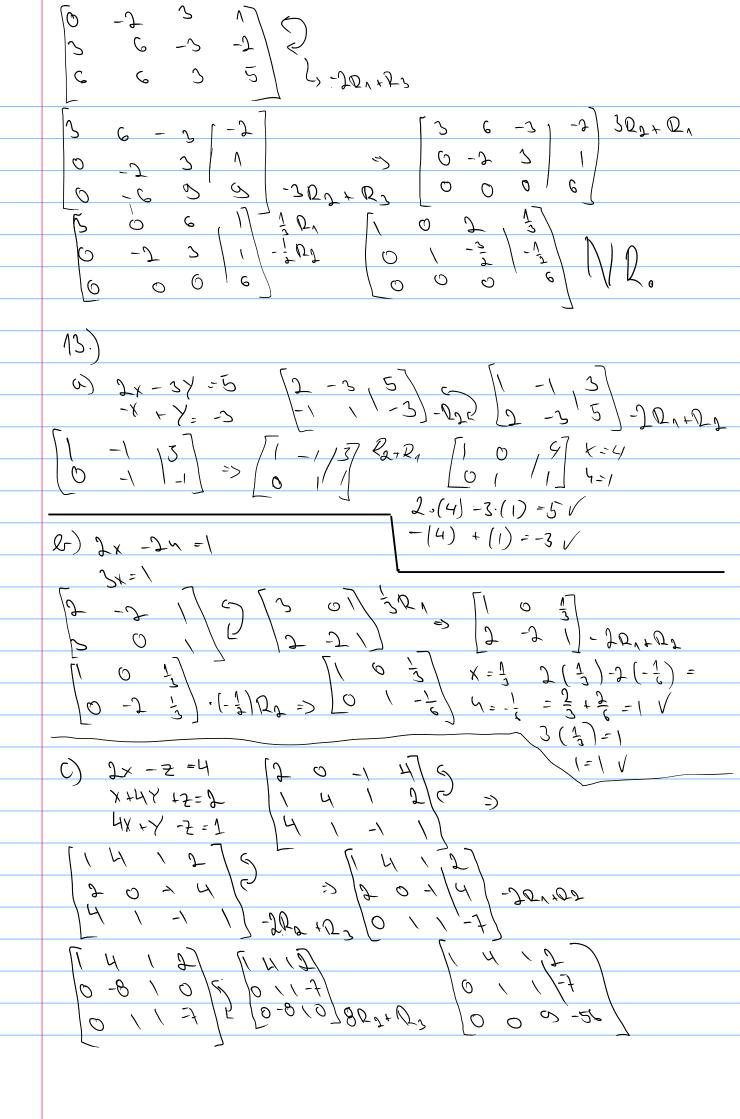
X2+ 4/1 =0

a) X1+X2+JX3=8 1 1 2 8 -1 -2 3 1 R2+R1 => -3 -7 4 10 3x1-7x7+F1X2=10 [1 - \(\sigma \) \(\sigma \) - \(\sigma \) \(\sigma \ 7 0 3 + 1 + J.J = 8 V -3-2+6=1 V 3.3-1+8=10 V 0) 7x1 + 2x2 + 2x2 = 0 8x1+ 12+1413=-1

```
C) X-Y+12-W=-1
    JX+X -JJ -JM = -J
    -x +2x -45-5m=/
     S-= WE-XE
                      0 1 -2 -3 0
0 3 -6 0 0 -3k2+D3
0 3 -6 0 0 -3k2+D3
 03-600 1342
 x y z w
 0 0 0 0 0
  -1 = -1 \times -1 + 12 - M = -1 - 0 - 0 = -1 <math>\sqrt{ }
  O = W
 X = -1
 N-Jt=0 Jt=N 5= JN
 (x,w, 2, w) = (-1, w, 1/24, 0)
   0a-2b +3c=1 0 -2 3 1

2a+6b -3c=2 3 6 -3 -1 

6a+6b, 3c=6 6 3 5 3-20a+23
```



 $0 \ 0 \ -\frac{56}{5} + \frac{30}{30}$ $X = \frac{34}{5}$ Novachádza to bohuzál $0 \ 0 \ -\frac{56}{5} - \frac{23}{5}$ $X = -\frac{1}{5}$ $X = -\frac{3}{2}$ $2 \frac{1}{2} \frac{1$ メノータイコークーンメノークナタイコ 12+342=0 => x2=-3x2 (X1,X2,X3)=(2+2x3, -3x3, X3)

b)

3xx - 3x3 + 4xx = -3

-4x + 12x2 - 2x + 4 + 4

4x2 - 3x + 12x4 = -3

-4x + 12x2 + 4 + 4

-4x + -3x + 12x4 = -3

-4x + -3x + -3x + -3

-5x + -3x + -3

-5x + -3x + - $X_{1} + \frac{34}{5}X_{1} = \frac{1}{5} \Rightarrow X_{1} = \frac{1}{5} - \frac{34}{5}X_{1} - \frac{1}{5} + \frac{4}{5}X_{1} = \frac{1}{5} - \frac{34}{5}X_{1} - \frac{1}{5} + \frac{1}{5}X_{1} = \frac{1}{5} - \frac{1}{5}X_{$ X2 - \$14= = = = 12 - \$1/4 (X, X2, X3, X1) = (= - 34 /4; -4 3/4 - 1 - 5 /4 / 1)

15.