**Math 220  
1.4: The Matrix Equation Ax=b  
Questions for flipped class**

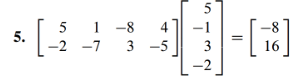
**Key terms**:

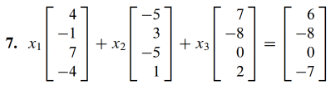
This is a section about “doing” and without lots of definitions and theorems.

**All for one**

(1.4.1)

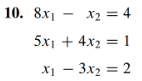
Write the matrix equation as a vector equation, or vice versa





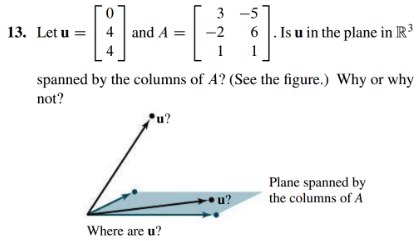
(1.4.2)

Write the system first as a vector equation and then as a matrix equation.

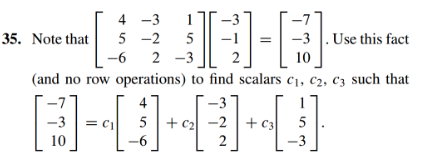


**One for all**

(1.4.3)



(1.4.4)



(1.4.7 theory question)

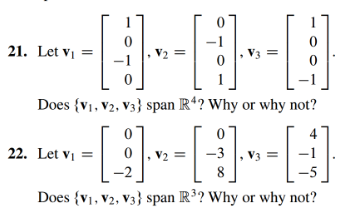
Prove:

A black text on a white background

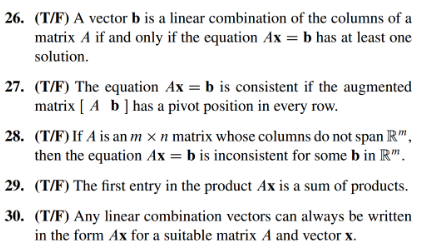
Description automatically generated

**this works in theory …**

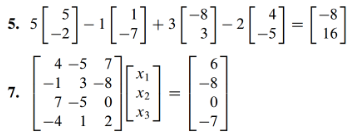
(1.4.5)



(1.4.6)



(1.4.1 solution)

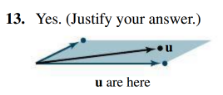


(1.4.2 solution)

Vector equation: 

Matrix equation: 

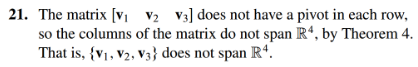
(1.4.3 solution)



(1.4.4 solution)

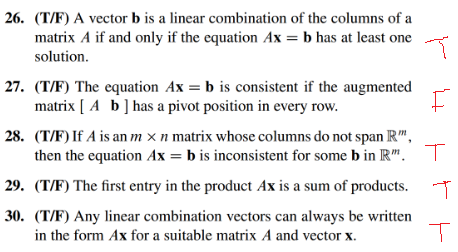


(1.4.5 solution)



The matrix made up of the given three vectors does have a pivot in each row so the columns span R3.

(1.4.6 solution)



(1.4.7 theory solution)

