

Birzeit University
Mathematics Department
Math234
Quiz 1

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Name:.....
Section: 5

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Question I [10 points]. Consider the linear system

$$\begin{aligned}x - y - \alpha z &= 3 \\-x + 2y - 2z &= 2\beta \\2x - y + \beta z &= \beta + 1.\end{aligned}$$

1. Under what conditions on the constants α and β does the the system have:
 - (a) no solutions,
 - (b) a unique solution,
 - (c) infinitely many solutions.
2. Find the solution set in the case when the system has infinitely many solutions.

Good Luck