

Math 309 Quiz 2 Practice

April 13, 2017

Problem 1. TRUE or BANANAS? A diagonal matrix is also a matrix in Jordan normal form.

Problem 2. Give an example of a 2×2 Jordan block.

Problem 3. Give an example of a 3×3 Jordan block.

Problem 4. Give two different examples of 4×4 matrices in Jordan normal form.

Problem 5. Find a basis for the solution space of the system of differential equations

$$y_1' = 4y_1 + 2y_2$$

$$y_2' = 2y_1 + 4y_2$$

Be sure to carefully explain why what you found is a *basis*.