

MATH 253

Today

1. 3.3 The Matrix of a Linear Transformation (Understand how to find the matrix of a linear transformation and use it to perform the linear transformation. Understand the importance of a basis in identifying what a linear transformation does.)
2. 3.4 Properties of matrices of linear transformations (Understand the application of matrices to computing linear transformations, including composition of transformations. Understand block matrix multiplication.)
3. WeBWorK

Where is today's material used?

1. Physics/math for change of coordinates

Warm-up

Define $T : \mathbb{R}^3 \rightarrow \mathbb{R}^4$ by $T(x, y, z) = (2x + z, z, z - x, 2z + x)$. Find the image, nullspace, rank, and nullity of T .

Next Time

1. 3.5 Change of basis
2. Note: 2 proofs due Wednesday, 1 proof due Friday.