

## Quiz 2 Topics

The material for Quiz 2 is the following:

1. All of the material of Quiz 1 and...
2. Vector spaces
3. The range of a matrix, the null space of the matrix
4. Relationships between the fundamental subspaces of a matrix
5. Linear independence
6. Orthogonal vectors and properties of matrices with orthonormal columns
7. The Gram-Schmidt procedure
8. QR factorizations

Here are some suggested practice problems:

**[LALFD]:**

From Problem Set I.3: Q3, p20. Q7, p20. Q10, p20.

From Problem Set I.5: Q1, p35. Q5, p35.

**[VMLS]:**

Q5.3, p103. Q5.6, p103. Q5.7, p104. Q11.12, p219. Q11.18, p220.

**[ILA]:**

From Problem Set 3.1: Q4, p131. Q25, p134. Q29, p134.

From Problem Set 3.2: Q22, p144. Q24, p144. Q25, p144. Q48, p147. Q49, p147.

From Problem Set 3.4: Q2, p175. Q8, p175. Q15, p176.

From Problem Set 3.5: Q13, p191. Q23, p192.

From Problem Set 4.2: Q1, p214. Q13, p216.