Chapter 1

1.2 standard problems

1.3 several general concepts and techniques

1.3.1 Example 1.1　　Theorem 1.1

1.3.2 perturbation theory and condition numbers

1.4 Horner's rule for polynomial evaluation　　Alg1.1

1.5 Floating Point Arithmetic

1.6 Polynomial Evaluation Revisited

1.7 Vector and Matrix Norms

课后习题：

Question: 1.1、 1.2、 1.3、1.4、1.5、1.6、1.13、1.14、1.15。

Chapter 2

Theorem 2.1

Alg 2.1

Theorem 2.4

Theorem 2.5

Alg 2.2

Alg 2.5

Theorem 2.6

课后习题 2.3、2.7、2.10、2.11

Chapter 3

Normal equation

QR Decomposition+ Algorithm 3.1（CGS+ MGS ）

SVD

+ Theorem 3.2

+ Theorem 3.3

Householder Transformations

+ Alg 3.2

Givens Rotations

Theorem 3.5

课后习题

Question 3.3　1 and 2

Quaestion 3.4、 3.5 、3.7、 3.8 、3.9 .

Chapter 5

Theorem 5.1 Weyl's theorem

Theorem 5.2　Courant-Fischer minimax theorem

Theorem 5.3 Sylvester's intertia theorem

Theorem 5.4

Theorme 5.5

Theorem 5.6 Relative Weyl's theorem

Theorem 5.7

5.3.1 Tridiagonal QR Iteration

5.3.2 Alg 5.1

Theorem 5.9

5.3.3 Divide-and-Conquer

Alg 5.2

5.3.4

Alg .5.4

Alg 5.5

Lemma 5.4

课后习题

Question 5.1、 5.5 、5.7 、5.14

算法题只需写出课本上的伪代码，不要求写程序。