

## Chapter 1 Tutorial&Lab

The exercises associated with Chapter 1 of the reference book (“Signals and Systems: A Matlab Integrated Approach” by O. Alkin) will be solved over the course of two weeks (2 Tutorial and 1 MATLAB Lab sessions).

The interest of the Lab is twofold: you will get more insight into the concepts introduced in Chapter 1 and expand your knowledge of MATLAB.

### 1 Chapter 1 - Tutorial 1

#### Problems

Solve the following problems:

*Continuous-time systems & basic operations:* **1.1(a), 1.2, 1.3(a,b), 1.4(b,e), 1.5(a)**

*Basic building blocks of continuous-time systems:* **1.6, 1.7, 1.8(a), 1.9(c,e), 1.14, 1.16**

### 2 Chapter 1 - Tutorial 2 & Lab 1

#### Problems

Solve the following problems:

*Periodicity of multi-tone signals:* **1.17(a,d), 1.18(b), 1.19**

*Energy & power signals:* **1.21(a), 1.24, 1.31(a)**

*Signals symmetry:* **1.26, 1.29(a)**

*Phasor representation of sinusoidal signals:* **1.31(a), 1.32(a)**

#### MATLAB Exercises & Problems

The first part of this Lab consists in reading and reproducing the MATLAB exercises **1.1** to **1.5**. The MATLAB exercises, their solutions, and associated .m files are available from the MATLAB toolbox help.

The second part of this Lab consists in solving the MATLAB Problems **1.40, 1.41, 1.42, 1.44, and 1.45**.

#### More ...

You would need to be able to solve all Problems, MATLAB Problems, and MATLAB Projects of Chapter 1.

Chapter 1 Problems represent typical exam questions.