Code:

clc; clear all; close all;

%% 3.14(d)

syms s;

d1 = ilaplace(1/s)

d2 = ilaplace((-s+1)/(s^2+s+2))

%% 3.14(g)

g1 = 2\*ilaplace(-1/(s+2))

g2 = 2\*ilaplace(1/(s+1))

g3 = 2\*ilaplace(exp(-s) \* (2/(s+2)))

g4 = 2\*ilaplace(exp(-s) \* (- 1/(s+1)))

g5 = 4\*ilaplace(exp(-2\*s) \* (1/(s+1)))

g6 = 4\*ilaplace(exp(-2\*s) \* (-1/(s+2)))

%% 3.14(h)

h1 = -1/2 \* ilaplace(1/(s+1))

h2 = 3 \* ilaplace(1/(s+2))

h3 = -5/2 \* ilaplace(1/(s+3))

Output:

d1 = 1

d2 = -exp(-t/2)\*(cos((7^(1/2)\*t)/2) - (3\*7^(1/2)\*sin((7^(1/2)\*t)/2))/7)

g1 = -2\*exp(-2\*t)

g2 = 2\*exp(-t)

g3 = 4\*heaviside(t - 1)\*exp(2 - 2\*t)

g4 = -2\*heaviside(t - 1)\*exp(1 - t)

g5 = 4\*heaviside(t - 2)\*exp(2 - t)

g6 = -4\*heaviside(t - 2)\*exp(4 - 2\*t)

h1 = -exp(-t)/2

h2 = 3\*exp(-2\*t)

h3 = -(5\*exp(-3\*t))/2