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ECE355L

TASK 3

Q1:

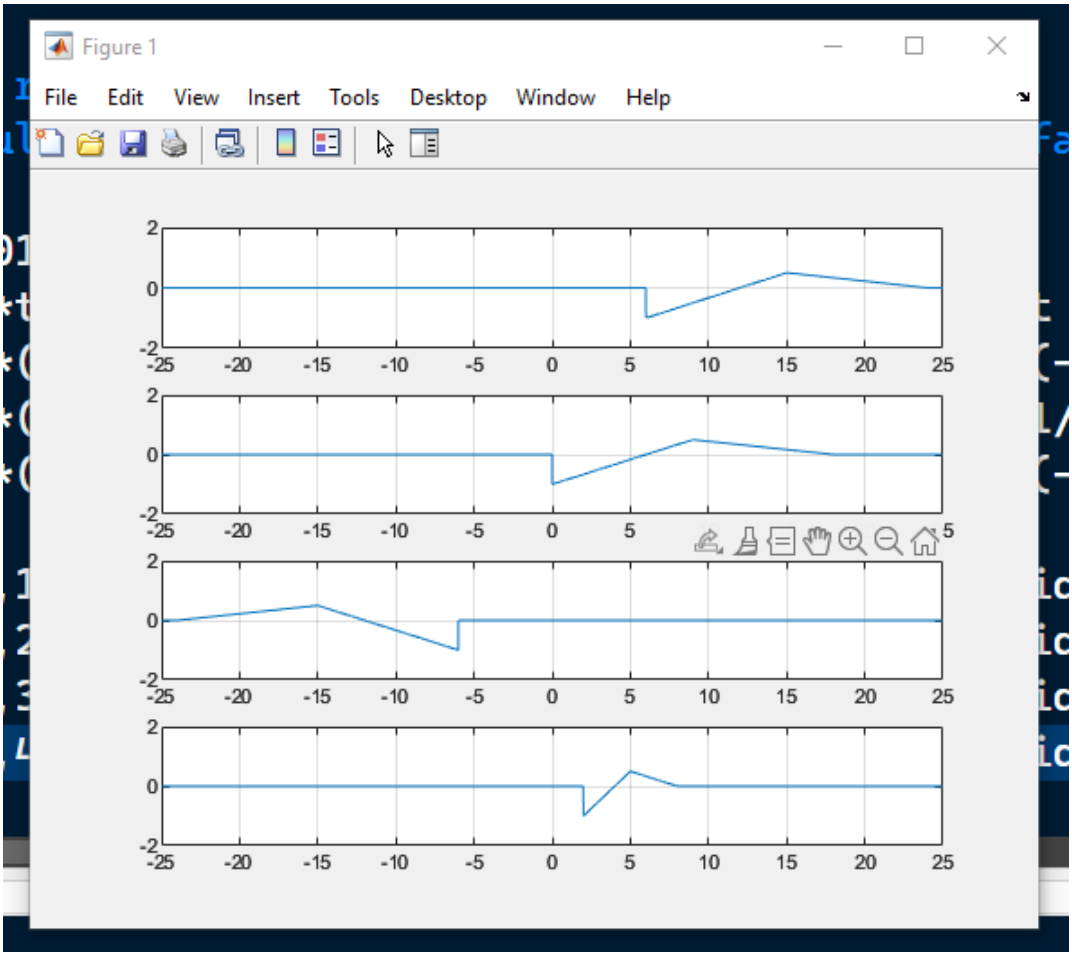
```
% Chase Lotito - SIUC Undergrad - ECE355L
% Task 3 - Q1 - Plotting with subplots

% using the rectpuls
% --> rectpuls(t - a, width) [a horizontal shift,
default width = 1]

t = -25:0.001:25;
fa = ((1/6)*t - 2).*rectpuls(t-10.5, 9) +  ((-1/18)*t +
(4/3)).*rectpuls(t-19.5, 9);
fb = ((1/6)*(t+6) - 2).*rectpuls((t+6)-10.5, 9) +  ((-
1/18)*(t+6) + (4/3)).*rectpuls((t+6)-19.5, 9);
fc = ((1/6)*(-t) - 2).*rectpuls((-t)-10.5, 9) +  ((-
1/18)*(-t) + (4/3)).*rectpuls((-t)-19.5, 9);
fd = ((1/6)*(3*t) - 2).*rectpuls((3*t)-10.5, 9) +  ((-
1/18)*(3*t) + (4/3)).*rectpuls((3*t)-19.5, 9);

subplot(4,1,1), plot(t, fa), axis([-25,25,-2,2]), grid
on;
subplot(4,1,2), plot(t, fb), axis([-25,25,-2,2]), grid
on;
subplot(4,1,3), plot(t, fc), axis([-25,25,-2,2]), grid
on;
```

```
subplot(4,1,4), plot(t, fd), axis([-25,25,-2,2]), grid
on;
```




Q2:

```
% Chase Lotito - SIUC Undergrad - ECE355L
% Task 3 - Q2

t = -7:0.001:7;

fa = -t.*rectpuls(t+2,4) + t.*rectpuls(t-1, 2);
fb = -(t-4).*rectpuls((t-4)+2,4) + (t-4).*rectpuls((t-
4)-1, 2);
```

```
fc = -(t/1.5).*rectpuls((t/1.5)+2,4) +
(t/1.5).*rectpuls((t/1.5)-1, 2);
fd = -(-t).*rectpuls((-t)+2,4) + (-t).*rectpuls((-t)-1,
2);
fe = -(2*t-4).*rectpuls((2*t-4)+2,4) + (2*t-
4).*rectpuls((2*t-4)-1, 2);
ff = -(2-t).*rectpuls((2-t)+2,4) + (2-t).*rectpuls((2-
t)-1, 2);

subplot(6,1,1), plot(t, fa), axis([-25,25,-6,6]), grid
on;
subplot(6,1,2), plot(t, fb), axis([-25,25,-6,6]), grid
on;
subplot(6,1,3), plot(t, fc), axis([-25,25,-6,6]), grid
on;
subplot(6,1,4), plot(t, fd), axis([-25,25,-6,6]), grid
on;
subplot(6,1,5), plot(t, fe), axis([-25,25,-6,6]), grid
on;
subplot(6,1,6), plot(t, ff), axis([-25,25,-6,6]), grid
on;
```

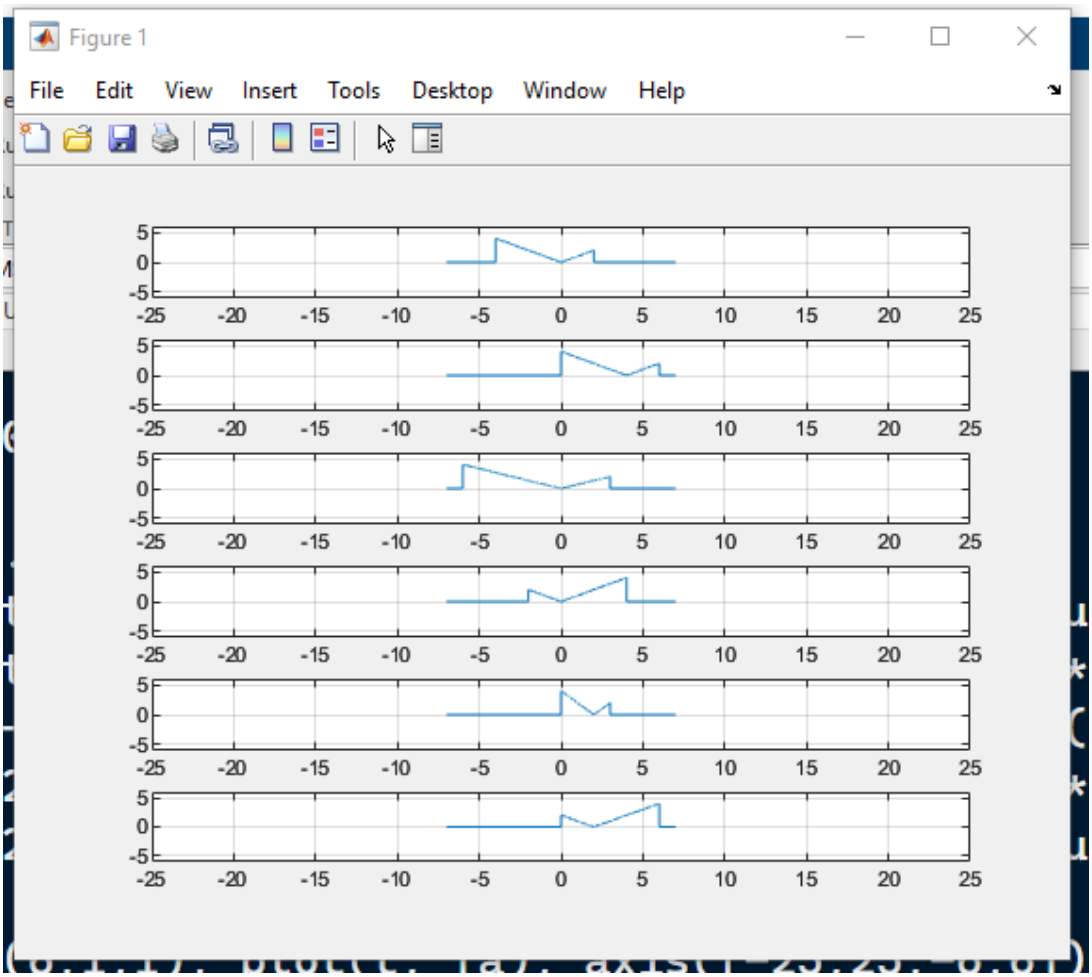


Figure 1
File Edit View Insert Tools Desktop Window Help
5
0
-5
-25 -20 -15 -10 -5 0 5 10 15 20 25