







```
clear;
close all;

% Coleman 3.3 #1

figure(10)
plot([-1, 0, 0.00001, 1], [2, 2, 0, 0])
ylim([-1, 3])
xlabel('-1 : 1')
title('3.3 #1 - f(x)')

figure(11)
f1 = @(x) 1 - (4/pi) * (2*sin(pi*x)/1 + 2*sin(pi*x)/3 + 2*sin(pi*x)/3);
fplot(f1, [-1,1]);
title('3.3 #1 - F(x)')

% Coleman 3.3 #4
figure(20)
f1 = @(x) 2*x+1;
r1 = -pi:0.1:pi;
plot(r1, f1(r1))
xlabel('-pi : pi')
title('3.3 #4 - f(x)')
```

```
figure(21)
```

```
f2 = @(x,n) (4/n)*sin(n*x);  
r2 = -pi:0.1:pi;  
plot(r2, f2(r2, 1) + f2(r2, 2) + f2(r2, 3))  
xlabel('-pi : pi')  
title('3.3 #4 - F(x)')
```

```
% Coleman 3.3 #6
```

```
figure(30)  
plot([-2*pi, -pi, -0.00001, 0, pi, 2*pi], [(-2*pi)^2, (-pi)^2, -0.00001, 0, -(pi^2), -((2*pi)^2)])  
xlabel('-2*pi : 2*pi')  
title('3.3 #6 - f(x)')
```

```
figure(31)
```

```
title('3.3 #6 - F(x)')
```