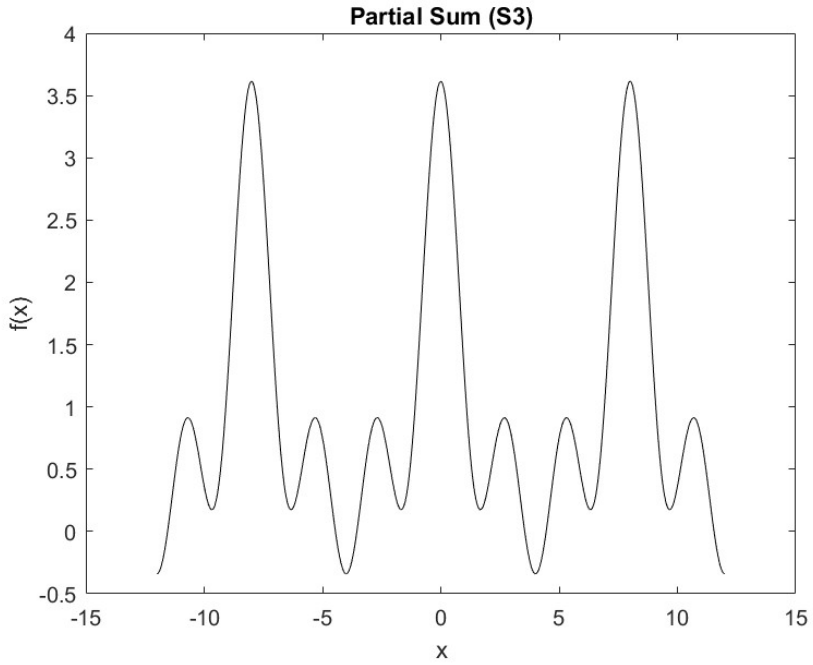
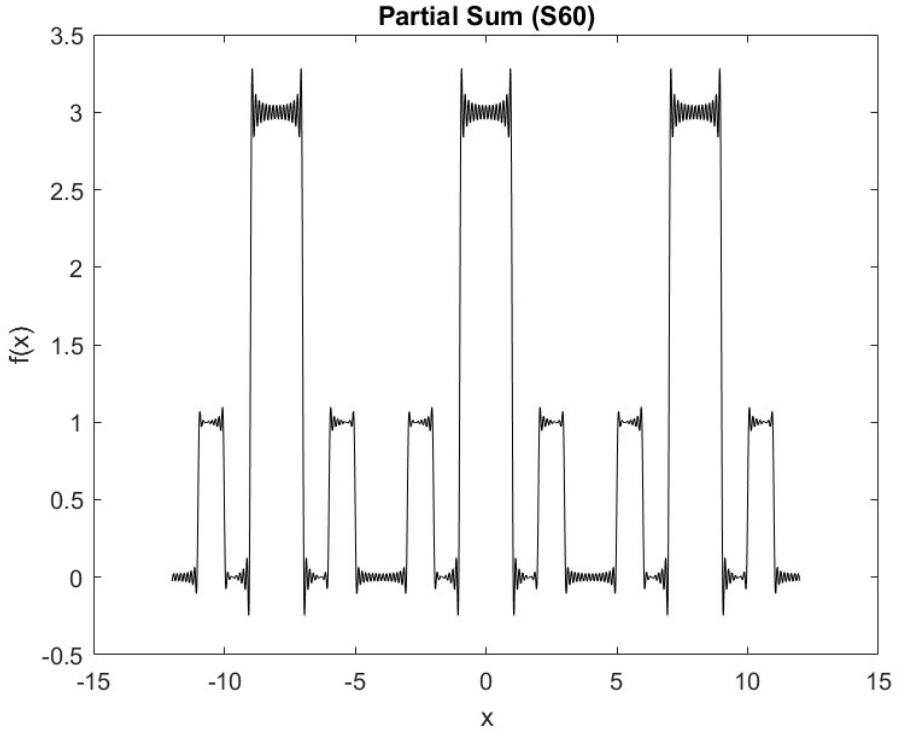
Question 1f

Partial Sum (S3)



Partial Sum (S60)



The code to generate the graphs

```
% Written By Tan Jin Chun (32194471)
% Last Modified: 12/5/2022
% Question 1f

clc;clear;close all;
syms n;

x = -12:0.01:12;
F = symsum((1/n)*((3*sin(n*pi/4) + sin(3*n*pi/4) -
sin(n*pi/2))*(cos(n*pi*x/4))),n,1,3);
y = 1 + (2/pi) * F;
figure;
plot(x,y,'k-');
xlabel("x");
ylabel("f(x)");
title("Partial Sum (S3)");

x = -12:0.01:12;
F = symsum((1/n)*((3*sin(n*pi/4) + sin(3*n*pi/4) -
sin(n*pi/2))*(cos(n*pi*x/4))),n,1,60);
y = 1 + (2/pi) * F;
figure;
plot(x,y,'k-');
xlabel("x");
ylabel("f(x)");
title("Partial Sum (S60)");
```