# FDM Homework Template

#### Yan XU

March 12, 2021

### 1 Introduction

This is where you describe the goals of this homework.

### 2 Method

Describe what you did. Did you have to innovate? Describe any hurdles.

### 3 Results

Include and describe results obtained in this homework. You can make a figure and print it to file, in encapsulated postscript (eps) format. To include the eps file in your latex document as shown in Figure 1:

```
\begin{figure} [htb]
\begin{center}
\includegraphics[width=2in]{figure.eps}
\caption{Describe the figure in this caption.} \label{figure.label}
\end{center}
\end{figure}
```

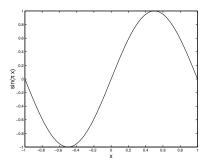


Figure 1: Describe the figure in this caption.

You can also make a table to show the accuracy results for your method. To make a table in your latex document as shown in Table 1:

```
\begin{table}[htb]
\caption{\label{table.label} Accuracy test for} \centering
\bigskip
\begin{small}
\begin{tabular}{|c|cc|cc|}
\hline
```

```
% after \\: \hline or \cline{col1-col2} \cline{col3-col4} ...
n &$L^2 $ error & order &$ L^\infty$ error & order\\hline
10& 1.16E-02 & -- & 6.63E-02 & -- \\
20& 3.12E-03 & 1.90 & 1.86E-02 & 1.84\\
40& 8.05E-04 & 1.95 & 4.76E-03 & 1.96 \\
80& 2.04E-04 & 1.98 & 1.19E-02 & 2.00\\hline
\end{tabular}
\end{small}
\end{table}
```

Table 1: Accuracy test for

n	$L^2$ error	order	$L^{\infty}$ error	order
10	1.16E-02	_	6.63E-02	_
20	3.12E-03	1.90	1.86E-02	1.84
40	8.05E-04	1.95	4.76E-03	1.96
80	2.04E-04	1.98	1.19E-02	2.00

#### 4 Discussion

Summarize your findings and add your comments here.

## A Computer Code

Here we include the computer code.

```
#include <stdio.h>
main(){
   printf("Hello world\n");
}
```