

```

priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ sudo
usage: sudo [-h] [-k] [-v]
usage: sudo [-l [:ABKnS] [:D group] [:h host] [-p prompt] [-u user] [command]
usage: sudo [-l [:ABKnS] [:r role] [:t type] [:c num] [:D directory] [-g group] [:h host] [-p prompt] [-R directory] [-t timeout] [-u user] [VAR=value] [-i|-s] [<command>]
usage: sudo [-e [:ABKnS] [:r role] [:t type] [:c num] [:D directory] [-g group] [:h host] [-p prompt] [-R directory] [-t timeout] [-u user] file ...
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ pwd
/home/priti
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ cd
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ ls
a.out assz.tar binary.c Desktop Documents Downloads linear.c Music Pictures ppl.c Public Q1_b.c q1.c Q1.C q2.c Q2.C snap Templates txt.1 Videos
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ cat
/home/priti

priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ touch file1.txt
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ vi file1.txt
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ pwd
/home/priti
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ mkdir d1
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ cd d1
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ ls
d1
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ cd ..
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ touch ass4
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ touch file1.txt
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ vi file1.txt
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ cat file1.txt
\documentclass[11pt]{article}

\usepackage{graphicx}
\usepackage{caption}

\title{My first document}
\date{7/11/22}
\author{Aditya}
\begin{document}
\naketitle
\newpage

\begin{center}
\begin{textrb}{College of Engineering Pune\\Department of Mathematics\\ MA-19003 : Univariate Calculus\\Term Exam.}{7/11/2022}
\end{textrb}
\end{center}
\end{document}

priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ dtl
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~$ \begin{textrb}{Section - 1 & hspace*{2cm}[15 Marks]}\\(1) For the function below find a formula for the upper sum obtained by dividing the interval [a,b] into n equal subintervals. Then take a limit of these sums as n\rightarrowfty to calculate the area under the curve over [a,b]:\\5(a) f(x) = 2x^2 over [0,3].\\(b) f(x) = x + x^2 5 over [0,1].\\(2) For the functions given below, find a formula for the lower sum obtained by dividing the interval [a,b] into n equal subintervals. Then take a limit of these sums as n\rightarrowfty to calculate the average value of f(x) over [a,b]:\\5(a) f(x) = x^2 + 1 5 over [0,3].\\(b) f(x) = 1/(x+1) 5 over [0,5].\\(3) Archimedes (287-212 B.C.) an inventor, military engineer, physicist, and the greatest mathematician of classical times in the Western world, discovered that the area under a parabolic arch is two-thirds of the area under the same parabolic arch y = h/(4h/b^2)x^2 , -b/2 \leq x \leq b/2 assuming that h and b are positive. Then use calculus to find the area of the region enclosed between the arch and the x-axis.\vspace{1cm}\\(4) Show that if k is a positive constant, then the area between the x-axis and one arch of the curve y= \sin kx 5 52/k5 \vspace{1cm}\\(5) The marginal cost of printing a poster when x5 posters have been printed is 1/(x+1). Find c(100) ->(1), the cost of printing posters 2 - 100.\\(6) Find the volumes of the solids generated by revolving the regions bounded by the lines and curves about the x-axis:\\\\((a) y = x^2, y=0, x=2,\\hspace*{1.5cm}(b) y = x^3, y=0, x=2,\\hspace*{1.5cm}(c) y = \sqrt{(9-x^2)}, y=0, \\hspace*{1.5cm}(d) y = x-x^2, y=0,\\hspace*{1.5cm}(e) y = \sqrt{\cos x}, 0 \leq x \leq \pi/2,\\hspace*{1.5cm}(f) y = |\sec x, x= 0 ,|\\hspace*{1.5cm}(g) x = -\pi/4 , x= \pi/4,\\hspace*{1.5cm}(h) The region enclosed by y = \sqrt{x}, x = 0, y=1, x=25\\hspace*{1.5cm}(i) The region enclosed by y = x^2, x = 0, y=25\\hspace*{1.5cm}(j) The region enclosed by y = x + \sqrt{2}\sin 2x, 0 \leq x \leq \pi/2 , x=0.5\\\\\\(3) Test the convergence of following integrals:\\\\((a) \int_0^\infty \frac{1}{x^2} dx,\\hspace*{1.5cm}(b) \int_0^\infty \frac{1}{x^2} dx,\\hspace*{1.5cm}(c) \int_0^\infty \frac{1}{x^2} dx,\\hspace*{1.5cm}(d) \int_0^\infty \frac{1}{x^2} dx,\\hspace*{1.5cm}(e) \int_0^\infty \frac{1}{x^2} dx\\priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ cat -5
cat: Invalid option -- '4'
Try 'cat -help' for more information.
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ cat -4 file1.txt
cat: Invalid option -- '4'
Try 'cat -help' for more information.
priti@priti-HP-Pavilion-Gaming-Laptop-15-ec1xxx:~/d1$ cat -n file1.txt
2
3 \usepackage{graphicx}
4 \usepackage{caption}
5
6
7
8
9 \title{My first document}

```



```
\maketitle
\prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat "file1.txt"
\documentclass[11pt]{article}

\usepackage{graphicx}
\usepackage{caption}

\titlename{My first document}
\date{7/11/22}
\author{Priti}
\begin{document}
    \maketitle
    \newpage

    \begin{center}
        \title{\textbf{College of Engineering Pune}\textbf{\textit{\&}}\textbf{Department} \textbf{\textit{\&}}\textbf{of Mathematics}\textbf{\textit{\&}}\textbf{MA-19003 : Univariate Calculus}}
        \Term Exam
        \date{7/11/2022}
    \end{center}

    \maketitle
    prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ tail -n 5 file1.txt
    ls: command not found
    prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ ls -l
total 8
-rw-rw-r-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-r-- 1 priti priti 372 Dec 26 15:48 file1.txt
-rw-rw-r-- 1 priti priti 2648 Dec 26 15:55 file2.txt
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> coop.txt
`C
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ tail -n 5 file1.txt
tail: invalid number of lines: "+5file1.txt"
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ tail -n 5 + file1.txt
*** ass4 <=>
*** coop.txt <=>
*** file1.txt <=>
    \date{7/11/2022}
\end{center}

\maketitle

\file2.txt <=>
(C) The region enclosed by  $S = \{(x, y) | 0 \leq y \leq \pi/2, x = \sqrt{4 - y^2}\}$ 
(C) Test the convergence of following integrals:\\\\
\int(a) \int_0^{\pi/2} \frac{1}{\sqrt{4-x^2}} dx
\int(b) \int_0^{\pi/2} \frac{1}{\sqrt{4-x^2}} dx
\int(c) \int_0^{\pi/2} \frac{1}{\sqrt{4-x^2}} dx
\int(d) \int_0^{\pi/2} \frac{1}{\sqrt{4-x^2}} dx

*** file1.txt <=>
    \date{7/11/2022}
\end{center}

\maketitle
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> file1.txt
`C
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ head file1.txt
\documentclass[11pt]{article}

\usepackage{graphicx}
\usepackage{caption}

\titlename{My first document}
\date{7/11/22}
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ ls -l
ls: command not found
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ ls -l
total 8
-rw-rw-r-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-r-- 1 priti priti 372 Dec 26 15:48 file1.txt
-rw-rw-r-- 1 priti priti 2648 Dec 26 15:55 file2.txt
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> coop.txt
`C
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ vi file1.txt
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> coop.txt
`C
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ arvind patil
`C
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> file1.txt
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ cat >> file1.txt
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ tail file1.txt
\begin{center}
    \title{\textbf{College of Engineering Pune}\textbf{\textit{\&}}\textbf{Department} \textbf{\textit{\&}}\textbf{of Mathematics}\textbf{\textit{\&}}\textbf{MA-19003 : Univariate Calculus}}
    \Term Exam
    \date{7/11/2022}
\end{center}

\maketitle
prittiprithi-HP-Pavilion-Gaming-Laptop-15-ecixxx:~/dtl$ ls -a
... ass4 coop.txt file1.txt file2.txt
```

```

(pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl)
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -a
.  .. ass4 coop.txt file1.txt file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777
ch: command not found
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777
chmod: missing operand after '777'
Try 'chmod --help' for more information.
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 7 7 7
chmod: cannot access '/': No such file or directory
chmod: cannot access '/': No such file or directory
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod +rwx file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 7 7 7
chmod: cannot access '/': No such file or directory
chmod: cannot access '/': No such file or directory
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777
chmod: missing operand after '777'
Try 'chmod --help' for more information.
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 762
chmod: missing operand after '762'
Try 'chmod --help' for more information.
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 762 file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777 file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod u+x file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777 file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod u+x file1.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rw-rw-- 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod 777 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rwxrwxr-x 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ chmod g+x coop.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ls -l
total 12
-rw-rw-- 1 priti priti 0 Dec 26 15:38 ass4
-rwxrwxr-x 1 priti priti 39 Dec 26 16:08 coop.txt
-rwxrwxrwx 1 priti priti 389 Dec 26 16:09 file1.txt
-rw-rw-- 1 priti priti 2048 Dec 26 15:55 file2.txt
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ^C
pritt@priti-HP-Pavilion-Gaming-Laptop-15-eclxxx:-/dtl$ ^C

```