**1. Write a program that takes a command-line argument n and prints a table of the powers of 2 that are less than or equal to 2^n.**

read -p "Enter a number to calcate 2^number (power) : " number

for (( i=0; i<=$number; i++))

do

echo " 2^$i = $((2\*\*$i))"

done



**2. Write a program that takes a command-line argument n and prints the nth harmonic number. Harmonic Number is of the form**

read -p " Enter a number to display given harmonic series : " n

printf "\n $n Harmonic numbers : "

for (( i=1; i<=$n; i++ ))

do

if [ $i == 1 ]

then

printf "(1/1)"

addition=1

else

printf " + (1/$i)"

addition=$(awk "BEGIN {printf \"%.2f\",${addition}+(1/${i})}")

fi

done

#printf "\n Addition till $n th term = $addition"

**3. Write a program that takes a input and determines if the number is a prime.**