1. Suppose you have two water containers – one is sphere shaped and another is cubic shaped. Write a

C program which can input two integers indicating radius of a sphere-shaped container and length of

sides of the cubic shaped container; display in which type of container you can store more water.

[Volume of a sphere is: 4/3×π×r 3 ; volume of a cube: a 3 ]

#include<stdio.h>

int main(){

int x,y;

float a,b;

printf("Enter the radius of a sphere-shaped\n");

scanf("%d",&x);

printf("Enter the side of a cubic-shaped\n");

scanf("%d",&y);

a=(float)4/3\*3.14\*x\*x\*x;

b=y\*y\*y;

if(a>b){

printf("Sphere-shaped container can store more water");

}

else(b>a);{

printf("Cubic-shaped container can store more water");

}

return 0;

}

2. Write a C program which can input an integer number from the user and display immediate next odd

number.

#include<stdio.h>

int main(){

int x;

printf("Enter the number\n");

scanf("%d",&x);

if(x%2==0){

x++;

printf("Next odd number is: %d",x);

}

else{

x+=2;

printf("Next odd number is: %d",x);

}

return 0;

}

3. Write a C program which takes an integer as user input that indicates the annual salary of a person.

The program should find and display the monthly salary of that person.

#include<stdio.h>

int main(){

int x;

float y;

printf("Enter the annual salary\n");

scanf("%d",&x);

y=(float)x/12;

printf("Monthly salary %.2f",y);

return 0;

}

4. Tashfin&#39;s uncle Tahseen recently went abroad. On his return he brought a lot of chocolates for his

nephews and nieces who are eight in number. Tahseen wants to distribute these chocolates evenly

among all his nephews and nieces. However before distributing he will keep five chocolates for his

brothers and sister. If the number of remaining chocolates cannot be evenly distributed among his

eight nephews and nieces, then rest of those remaining chocolates will be kept for Tahseen’s

brothers and sister. Develop a C program which will take as input the number of chocolates Tahseen

brought, and display how many chocolates will Tahseen’s each nephew/nieces get. Also, find and

display how many chocolates will be for Tahssen’s brothers and sisters.

#include<stdio.h>

int main(){

int x,a,b;

printf("Enter the number of chocolates\n");

scanf("%d",&x);

if(x%8==0){

a=(x-5)/8;

printf("Tashfin's brother and sister will get 5 chocolates\nand Tashfin's nephews and nieces each will get %d chocolates,",a);

}

else if (x%8!=0);{

a=(x-5)/8;

b=5+(x%8);

printf("Tashfin's brother and sister will get %d chocolates\nand Tashfin's nephews and nieces each will get %d chocolates,",b,a);

}

return 0;

}

5. A newborn baby normally sleeps a lot. If baby’s sleep time is more than double of awake time it is

called “Over sleepy infant”. If sleep time is in range of equal to double of awake time then it is called

“Normal sleepy infant”. If sleep time is less than awake time then it is called “Less sleepy infant”.

Write a C program which can input a newborn’s sleep time and awake time (in integers) and display

what type of sleep pattern he/she maintains.

#include<stdio.h>

#include<math.h>

int main(){

int x,y,z;

printf("Enter the baby's sleep time\n");

scanf("%d",&x);

printf("Enter the baby’s awake time\n");

scanf("%d",&y);

z=2\*y;

if(x>z){

printf("The baby maintains Over sleepy infant");

}

else if(x==z){

printf("The baby maintains Normal sleepy infant");

}

else if(x<y){

printf("The baby maintains Less sleepy infant");

}

return 0; }

6. Tashfin’s cousin bought some books for him where the shopkeeper give one coupon with each book

and said that if he returns those coupons then for every three coupons he can get one chocolates and

for each coupons he can get one chewing gum. However Tashfin is more interested in chocolates

than chewing gum. Write a C program which can input number of books Tasfin’s cousin bought and

display how many chocolates and chewing gum he can get by returning those coupons maintaining

Tashfin’s choice.

#include<stdio.h>

int main(){

int x,y,z;

printf("Enter the number of books\n");

scanf("%d",&x);

if(x%3==0){

y=x/3;

printf("The number of chocolates: %d",y);

}

else if(x%3!=0){

y=(x-(x%3))/3;

z=(x-(x-(x%3)));

printf("The number of chocolates: %d\nThe number of chewing gum: %d ",y,z);

}

return 0;

}