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Assignment-10

①
```
#include<stdio.h>
float areaCircle(int);
 int main()
 {
int radius; float Area;
printf("Enter radius of a circle\n");
scanf("%d", &radius);
Area = areaCircle(radius);
printf("Area of circle having %d radius is %f", radius,
 Area);
return 0;
 }

float areaCircle(int radius)
  {

    return 3.14*radius*radius;

 }
```

②
```
#include <stdio.h>
float simpleInterest(float float float);
 int main()
 {
floatint principal, rate, time; SimpleInterest;
printf("Enter principal, rate and time\n");
 scanf("%f%f%f", &principal, &rate, &time);
```

SimpleInterest = simpleInterest(principal, rate, time)
printf("Simple Interest is %.f", SimpleInterest);
return 0;

}

float simpleInterest(float principal, float rate, float time)
{

return $\left(\frac{P*R*T}{100}\right)$;

}

③ #include <stdio.h>
int checkEvenorOdd(int);
int main()
{
int number, result;
printf("Enter a number\n");
scanf("%d", &number);
result = checkEvenorOdd(number);
if(result == 1)
printf("%d is even", number);
else
printf("%d is odd", number);

return 0;

}

```
int checkEvenorOdd (int number)
  {

if (number.%.2)
     return 0;

else
     return 1;

  }
```

⑤
```
#include <stdio.h>
void printOdd (int);
int main()
{

int number;
printf("Enter number of odd number you want to print\n");
scanf("%d", &number);
printf("%d natural odd numbers are :\n", number);
  printOdd (number);
  return 0;

}

Void printOdd (int number)
   {
     int i;
  for (i=1; i<=number; i++)
                {printf("%d ", 2*i-1);
```

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```
   }
```

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(4)

```
#include <stdio.h>
void printNatural(int);
int main()
{
int number;
printf(" Enter number of natural numbers you want to print:
escanf("%d", &number);
printf("%d\n", number);
printf(" %d natural numbers are: \n", number);
    printNatural(number);
return 0;

}

void printNatural(int number)
  {

  int i;
for(i=1; i<= number; i++)
  printf("%d ", i);

}
```

⑥
```
#include <stdio.h>
int fact(int);
int main()
  {
    int number, factorial;
printf("Enter a number\n");
scanf("%d", &number);
printf("%d\n", number);
int factorial = fact(number);
  printf("Factorial of %d is %d", number, factorial);
return 0;
  }

int fact(int number)
  {
    int i, factorial = 1;
for(i=1; i
  for(i=number; i>0; i--)
    {factorial = factorial * i;
return factorial;
}
```

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(7)
```
#include <stdio.h>
int combination(int, int);
int main()
{
int n, r, result;
printf(" Enter total number of items and items to be selected at
                    time\n");
scanf("%d %d", &n, &r);
printf("%d %d\n", n, r);
result = combination(n, r);
printf(" Ways to combine are %d ", result);
return 0;

}

int combination(int n, int r)
    {
return (fact(n) / fact(r) . fact(n-r));

}
```

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(8)
```
#include <stdio.h>
int arrangement(int, int);
    int main()
    {
int n, r, result;
printf("Enter number of items and items to be arranged\n");
scanf("%d %d", &n, &r);
printf("%d %d\n", n, r);
result = arrangement(n, r);
printf("No: of arrangements are: %d\n", result);
    return 0;

}

int arrangement(int n, int r)
   {

return (fact(n) / fact(n-r));

}
```

(9)
```
#include <stdio.h>
int checkDigit(int, int);
int main()
{

int number, digit, result;
printf("Enter a number and a digit\n");
scanf("%d%d", &number, &digit);
result = checkDigit(number, digit);
if(result==1)
  printf("Yes %d presents in %d", digit, number);
else
printf("NO %d not present in %d", digit, number);
return 0;

}

int checkDigit(int number, int digit)
  {
     int num = number;
for(  ; num>0; num/=10)
     {
if(num%10 == digit)
     return 1;
}
return 0;
}
```

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(10)
```
#include <stdio.h>
void primefactors(int);
int main()
  {
int number;
printf("Enter a number:\n");
scanf("%d", &number);
primefactors(number);
return 0;
  }
void primefactors(int number)
  {

int i=2,j;
for(i=2; number>1; )
    {

if( number%i==0)
      {
for(j=2; j<i; j++)
      {
if( i%j==0)
    break;

}
if(j==i)
  printf("%d ", i);
    number = number/i;
}
  else
    i++;

  }
```

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