1. Length and breadth of a rectangle are 5 and 7 respectively. Write a program to calculate the area and perimeter of the rectangle.

class Assignment

{

public static void main(String[] args) {

int length = 5;

int breadth = 7;

double area;

double perimeter;

area = length \* breadth;

perimeter = 2\*(length+breadth);

System.out.println("Area is "+area);

System.out.println("Perimeter is "+perimeter);

}

}

1. Write a program to calculate the perimeter of a triangle having sides of length 2,3 and 5 units.

class Test1

{

public static void main(String[] args) {

int a=2, b=3, c=5;

int perimeter;

perimeter = a+b+c;

System.out.println("Perimeter of Triangle is "+perimeter);

}

}

1. Write a program to add 8 to the number 2345 and then divide it by 3. Now, the modulus of the quotient is taken with 5 and then multiply the resultant value by 5. Display the final result.

class Test1

{

public static void main(String[] args) {

int num = 2345;

int num1 = num + 8;

double num2 = num1 / 3;

double num3 = num2 + 5;

double num4 = num3 \* 5;

System.out.println("Final Result is "+num4);

}

}

|  |
| --- |
| . |
| 4. | Now, solve the above question using assignment operators (eg. +=, -=, \*=). |
|  | 5. |
|  | Write a program to check if the two numbers 23 and 45 are equal.  class Test1  {  public static void main(String[] args) {  int num1 = 23;  int num2 = 45;  if (num1 == num2) {  System.out.println("They are equal");  }  else {  System.out.println("Not equal");  }    }  } |
|  | 6. |
|  | Write a program to print the power of 7 raised to 5. |
|  | import java.math.\*;  class Test1  {  public static void main(String[] args) {  System.out.println("7 raised to power 5 is "+(Math.pow(7, 5)));  }  }  7. |
|  | Assign values of variables 'a' and 'b' as 55 and 70 respectively and then check if both the conditions 'a < 50' and 'a < b' are true. |
|  | class Test1  {  public static void main(String[] args) {  int a = 55;  int b = 70;    if(a<50 && a<b) {  System.out.println("Both are true");  }  else {  System.out.println("Both are false");  }  }  }  8. |
|  | Now solve the above question to check if atleast one of the conditions 'a < 50' or 'a < b' is true.  class Test1  {  public static void main(String[] args) {  int a = 55;  int b = 70;    if(a<50 || a<b) {  System.out.println("Both are true");  }  else {  System.out.println("Both are false");  }  }  } |
|  | 9. |
|  | If the marks of Robert in three subjects are 78,45 and 62 respectively (each out of 100 ), write a program to calculate his total marks and percentage marks. |
|  | class Test1  {  public static void main(String[] args) {  int s1 = 78;  int s2 = 45;  int s3 = 62;  int fullmarks = 300;    double total\_marks = s1+s2+s3;  double percentage = (total\_marks/fullmarks)\*100;    System.out.println("Total Marks obtained is "+total\_marks+ " Percentage is "+percentage);  }  }  10. |
|  | Suppose the values of variables 'a' and 'b' are 6 and 8 respecrtively, write two programs to swap the values of the two variables. |
|  | 1 - first program by using a third variable |
|  | 2 - second program without using any third variable |
|  | ( Swapping means interchanging the values of the two variables E.g.- If entered value of x is 5 and y is 10 then after swapping the value of x and y should become 10 and 5 respectively.) |
|  | //By Using third variable  class Test1  {  public static void main(String[] args) {  int a = 6;  int b = 8;  int c;    c = a;  a = b;  b = c;  System.out.println("a is "+a+" b is "+b);  }  }  //Without using third variable  class Test1  {  public static void main(String[] args) {  int a = 6;  int b = 8;  a = a + b;  b = a - b;  a = a - b;    System.out.println("a is "+a+" b is "+b);  }  }  11. |
|  | Write a program to convert Fahrenheit into Celsius. |
|  | class Test1  {  public static void main (String args[])  {  float Fahrenheit, Celsius;  Fahrenheit = 98;  Celsius = ((Fahrenheit-32)\*5)/9;  System.out.println("Temperature in celsius is: "+Celsius);  }  }  12. |
|  | The total number of students in a class are 90 out of which 45 are boys. If 50% of the total students secured grade 'A' out of which 20 are boys, then write a program to calculate the total number of girls getting grade 'A'. |
|  | class Test1  {  public static void main(String[] args) {  double total = 90;  double boys = 45;    double A = 0.5\*total;  double boys\_A = 20;  double girls\_A = A - boys\_A;  System.out.println("Girls with A grade are : "+girls\_A);  }  }  13. |
|  | Write a program to calculate the sum of the first and the second last digit of a 5 digit. |
|  | E.g.- NUMBER : 12345 OUTPUT : 1+4=5 |
|  | class Test1  {  public static void main(String[] args) {  int r, num = 123456, fd=0, sld=0, sum, rev=0;    sld=(num%100)/10;    while(num!=0)  {  fd=num%10;  num=num/10;  }  sum = fd + sld;    System.out.println("Sum = "+sum);  }  }  14. |
|  | Take a 4 digit number. Write a program to display a number whose digits are 2 greater than the corresponding digits of the number TAKEN. |
|  | For example, if the number which was taken is 5696, then the displayed number should be 7818. |
|  | class Test1  {  public static void main(String[] args) {  int num = 7534, a,b,c,d, res;  a=(num/1000);  num=(num%1000);  b=(num/100);  num=(num%100);  c=(num/10);  d=(num%10);    res=(a+2)\*1000+(b+2)\*100+(c+2)\*10+(d+2);  System.out.println(res);  }  }  15. |
|  | Write a program to calculate the sum of the digits of a 3-digit number. |
|  | Number : 132 Output : 6 |
|  | class Test1  {  public static void main(String[] args) {  int num = 123;  int rem, sum = 0;  while(num > 0) {  rem = num % 10;  sum = sum + rem;  num = num / 10;  }  System.out.println("Sum of the digits is "+sum);    }  }  16. |
|  | Write a program to reverse a 3-digit number. E.g.-Number : 132 Output : 231 |

class Test1

{

public static void main(String[] args) {

int num = 235, rev=0;

System.out.println("Original Number is "+num);

while(num!=0) {

int d = num%10;

rev = rev\*10 + d;

num/=10;

}

System.out.println("Reversed Number is "+rev);

}

}