Q1. Write a Java method to find the smallest number among three numbers.  
Test Data:  
Input the first number: 25  
Input the Second number: 37  
Input the third number: 29   
Expected Output:

The smallest value is 25.0

Q2.Write a Java method to compute the average of three numbers.  
Test Data:  
Input the first number: 25   
Input the second number: 45  
Input the third number: 65  
Expected Output:

The average value is 45.0

Q3.Write a Java method to display the middle character of a string.   
Note: a) If the length of the string is odd there will be two middle characters.  
b) If the length of the string is even there will be one middle character.

Hint: use the following method:

String input;

int strLength=input.length();

Q4.Write a Java method to count all vowels in a string.   
Test Data:  
Input the string: FlipFlopLabs

Hint:

input.charAt(position);

Q5. Write a Java method to display the first 50 pentagonal numbers.  
Note: A pentagonal number is a figurate number that extends the concept of triangular and square numbers to the pentagon, but, unlike the first two, the patterns involved in the construction of pentagonal numbers are not rotationally symmetrical.  
Expected Output:

1 5 12 22 35 51 70 92 117 145

176 210 247 287 330 376 425 477 532 590

651 715 782 852 925 1001 1080 1162 1247 1335

1426 1520 1617 1717 1820 1926 2035 2147 2262 2380

2501 2625 2752 2882 3015 3151 3290 3432 3577 3725

Q6.Write a Java method to compute the future investment value at a given interest rate for a specified number of years.   
Sample data (Monthly compounded) and Output:  
Input the investment amount: 1000  
Input the rate of interest: 10  
Input number of years: 5

Expected Output:

Years FutureValue

1 1104.71

2 1220.39

3 1348.18

4 1489.35

5 1645.31

Q7.Write a Java method to check whether a year (integer) entered by the user is a leap year or not.

Expected Output:

Input a year: 2012

true

Q8.Write a Java method to check whether a string is a valid password.  
Password rules:  
A password must have at least ten characters.  
A password consists of only letters and digits.  
A password must contain at least two digits.

Expected Output:

1. A password must have at least eight characters.

2. A password consists of only letters and digits.

3. A password must contain at least two digits

Input a password (You are agreeing to the above Terms and

Conditions.): pass1234

Password is valid: pass1234