public class MyClass {

public static void main(String args[])

{

int[] arr={2,3,8,9,14,17,20,22};

System.out.println(BinarySearch(arr,10));

}

public static int BinarySearch(int[] arr,int val)

{

int result=0;

int start=0;

int end=arr.length-1;

while(start<=end)

{

int mid=start + (end-start)/2;

if(arr[mid]<val)

{

start=mid+1;

}

else if(arr[mid]>val)

{

end=mid-1;

}

}

result=Math.min(Math.abs(arr[start]-val),Math.abs(arr[end]-val));

return result;

}

}