



Linear Search: no need to sort data, Very slow

Binary Search: Sorted data, very fast

Put FALSE in VLOOKUP and 0 in MATCH for Linear Search (Exact match)

	Data Set #1		Data Set #2	
	10		20	
	20		40	
	30		50	
	40		10	
	50		70	
	60		30	
	70		50	
Lookup Value:	70	25	70	25
	70 (Using TRUE) Find the value or the value less than exact value =VLOOKUP(C1,C7,C13,1,TRUE)			

	Data Set #1		Data Set #2	
	10		20	
	20		40	
	30		50	
	40		10	
	50		70	
	60		30	
	70		50	
Lookup Value:	70	25	70	25
	70	20		
	=VLOOKUP(D15,C7:C13,1,TRUE)			

	Data Set #2		
	20		
	40		
	50		
	10		
	70		
	30		
	50		
	70		
	70	=VLOOKUP(F15,F7:F13,1,FALSE)	
	50	=VLOOKUP(F15,F7:F13,1,TRUE)	

If you want to do:

Greater-Sorted Descending Order

Less – Sorted Ascending Order

Spread Sheet #1

Using VLOOKUP

Gradebook			
Name	Score	Grade	
Alice	923	A	=VLOOKUP(H8,\$C\$8:\$E\$11,3,TRUE)
Bob	672	F	
Charlie	785	C	
Dan	850	B	
Eve	719	C	
Frank	961	A	



Same question using INDEX/MATCH (You can always use INDEX/MATCH for any VLOOKUP)

Gradebook			
Name	Score	Grade	
Alice	923	A	=INDEX(\$E\$8:\$E\$11;MATCH(H8,\$C\$8:\$C\$11,1),1)
Bob	672	F	
Charlie	785	C	
Dan	850	B	
Eve	719	C	
Frank	961	A	

Spread Sheet #2

Q3: What region is Country #1 in?	Row Number	
Answer: Africa	4	=MATCH(Overview!C6;'Regions and subregions'!C:C;1)
		=INDEX('Regions and subregions'!A:A;Overview!D17;1)

Q5: Is Country #1 and Country #2 in the same region? (Yes/No)	
Answer: Yes	=IF(C17=E6,"Yes","No")

```

if (C17==E6) {
    return "Yes";
}else{
    return "No";
}

```

Q6: Is Country #1 and/or Country #2 in the Region specified?	
Answer: No	=IF(C17=E6,"Yes",IF(C20=E6,"Yes","No"))

```
if (C17==E6) {  
    return "Yes";  
}else{  
    if(C20==E6) {  
        return "Yes";  
    }else{  
        return "No";  
    }  
}
```