Hashing PreLab

The following key-value pairs, all calculate to the same hash index with the hash function shown below:

Pax 654
Eleven 341
Angel 70
Abigail 867
Jack 5309

Hash function: ***hashCode(key)* = Math.abs((*key.hashCode()* modulo 10) modulo table.length)**

Show the state of the hash table after all pairs are added ***using linear probing*** and ***quadratic probing*** to resolve collisions:

Linear Probing:

index	*key*	*value*
a[0]		
a[1]		
a[2]		
a[3]		
a[4]		
a[5]		
a[6]		
a[7]	"Pax"	654
a[8]	"Eleven"	341
a[9]	"Angel"	70
a[10]	"Abigail"	867
a[11]	"Jack"	5309
a[12]		
a[13]		
a[14]		
a[15]		
a[16]		
a[17]		
a[18]		
a[19]		
a[20]		
a[21]		
a[22]		
a[23]		
a[24]		
a[25]		
a[26]		
a[27]		
a[28]		

Quadratic Probing:

index	*key*	*value*
a[0]		
a[1]		
a[2]		
a[3]		
a[4]		
a[5]		
a[6]		
a[7]	"Pax"	654
a[8]	"Eleven"	341
a[9]		
a[10]		
a[11]	"Angel"	70
a[12]		
a[13]		
a[14]		
a[15]		
a[16]	"Abigail"	867
a[17]		
a[18]		
a[19]		
a[20]		
a[21]		
a[22]		
a[23]	"Jack"	5309
a[24]		
a[25]		
a[26]		
a[27]		
a[28]		

Make the following changes to each hash table and show the final results below.

- Replace the value for **Eleven** with **170**
- remove **Pax**
- remove **Angel**
- add the key-value pair **Gino-348**

Linear Probing:

index	*key*	*value*
a[0]		
a[1]		
a[2]		
a[3]		
a[4]		
a[5]		
a[6]		
a[7]	Gino	348
a[8]	“Eleven”	170
a[9]	removed	removed
a[10]	“Abigail”	867
a[11]	“Jack”	5309
a[12]		
a[13]		
a[14]		
a[15]		
a[16]		
a[17]		
a[18]		
a[19]		
a[20]		
a[21]		
a[22]		
a[23]		
a[24]		
a[25]		
a[26]		
a[27]		
a[28]		

Quadratic Probing:

index	*key*	*value*
a[0]		
a[1]		
a[2]		
a[3]		
a[4]		
a[5]		
a[6]		
a[7]	Gino	348
a[8]	“Eleven”	170
a[9]		
a[10]		
a[11]	removed	removed
a[12]		
a[13]		
a[14]		
a[15]		
a[16]	“Abigail”	867
a[17]		
a[18]		
a[19]		
a[20]		
a[21]		
a[22]		
a[23]	“Jack”	5309
a[24]		
a[25]		
a[26]		
a[27]		
a[28]		