

Investigate the linear search algorithm

1	def binary_search(items,target):
2	low=0
3	high=len(items)-1
4	mid=high//2
5	while target != items[mid]:
6	mid=(low+high)//2
7	if items[mid] < target:
8	low=mid+1
9	elif items[mid] > target:
10	high=mid-1
11	return items[mid], mid
12	items=[0,5,13,19,22,41,55,68,72,81,98]
13	target=33
14	print(binary_search(items,target))

1. Identify the variables	
2. What is are the initial values of low, high and mid?	
3. What is the // operator doing?	
4. What are the parameters to the function binary_search	
5. How many parameters does the function binary_search take	
6. Give the example of selection in the code	
7. Give the example of iteration	
8. Under what condition does the loop stop	
9. What do you notice about the values in the items list?	

10. Explain what is happening in lines 7-10	
11. Overall what is the code doing?	

