

Investigate the linear search algorithm

```

1  def linear_search(target,items):
2
3      length_of_list = len(items)
4      for i in range(length_of_list):
5          if items[i] == target:
6              return i
7
8      return -1
9
10 items=[17, 2, 5, 21, 32, 18, 13, 7, 11, 8]
11 target=32
12 print(linear_search(target,items))
  
```

1. Identify the variables	<code>length_of_list, i, target</code>
2. Explain what the function <code>len()</code> is doing	Getting the length of the list items
3. What is the value of <code>length_of_list</code> ?	10
4. Explain what the function <code>len()</code> is doing	Getting the length of the list items
5. What does <code>def</code> do?	Defines a function
6. How many parameters does the function <code>linear_search</code> take?	2
7. What type of data structure is <code>items</code> ?	list
8. What datatype is <code>target</code> ?	integer
9. What are the parameters to <code>linear_search</code> ?	target and items
10. What is the <code>FOR</code> loop doing?	Goes through each item in the list

11. What does the IF statement do?	For each value in the list it compares it with the target value. If they are the same the index position is returned.
12. What line are we calling the user defined function on?	9
13. What is happening on line 6? What does this mean?	If the target value does not occur in the list then a value of -1 is returned
14. Overall what is the code doing?	Identifying the position in the list of a target item by comparing the value