1. The linear search algorithm can be applied to vectors, dynamic arrays and arrays.   **1 point**

   ○ True

   ○ False

2. Why does the linear search algorithm work?   **1 point**

   ○ Because it starts at the leftmost element

   ○ Because every element is inspected until the desired value is found, or not

   ○ Because vectors will or will not contain the desired value

3. For a variant of the linear search algorithm where we can start searching at the rightmost element, will this be better than starting with the leftmost element?   **1 point**

   ○ It is better starting with the leftmost element

   ○ It makes no difference

   ● It is better starting with the rightmost element

4. Consider the following incomplete piece of pseudocode for the linear search algorithm (for *v* being an input vector and *item* being a data value):   **1 point**

$$\textbf{function } \text{LinearSearch}(v, item)$$
$$\textbf{for } (1 \leq i \leq \text{LENGTH}[v]) \textbf{ do}$$
$$\textbf{if } \boxed{\text{MISSING}} \textbf{ then}$$
$$\textbf{return } i$$
$$\textbf{end if}$$
$$\textbf{end for}$$
$$\textbf{return } \text{FALSE}$$
$$\textbf{end function}$$

   What should go in the place of the box saying **MISSING**?

   ○ v[i] < item

   ○ v[i] = item

   ○ v[j] = item

   ○ v = item