fe_find_index (node_list) → returns index

node_list : 1 x 8 vector, connectivity for single element
(1 x 8: node ID's)

index : 1 x 24 vector, global dof ID's for each node for a single element

Notes:

- The goal is to populate the vector index.
- Using two for loops we populate index from the zero component to the end, in order one-by-one.

1.) Grab node ID from node_list.

2.) Multiply by 3 or ndof. That gives you the global dof ID for that particular node ID. This is the x component.

3.) Stick that ID in index.

4.) The global dof ID's are in order, so the next two ID's for the node are ID+1 and ID+2. Thes are the y and z components.

5.) Repeat for other seven nodes in element.

index = [ 0 1 2 (node 1) 3 4 5 (node 2) 6 ... 24 ]$^T$

↑ global x, y, z dof ID's for node 1

ex.

If our node ID was 17, the global ID for the x component would be $17 \times 3 = 51$. The global ID's for the y and z components would be 52 and 53.