1. The list \([4, 2, 5, 6, 7, 3, 1]\) is shown below after each pass of a sorting algorithm:

\[
\begin{align*}
[1, 2, 5, 6, 7, 3, 4] \\
[1, 2, 5, 6, 7, 3, 4] \\
[1, 2, 3, 6, 7, 5, 4] \\
[1, 2, 3, 4, 7, 5, 6] \\
[1, 2, 3, 4, 5, 7, 6] \\
[1, 2, 3, 4, 5, 6, 7] \\
[1, 2, 3, 4, 5, 6, 7]
\end{align*}
\]

Which sorting algorithm is being executed?

(a) bubble sort
(b) selection sort
(c) insertion sort

2. The list \([4, 2, 5, 6, 7, 3, 1]\) is shown below after each pass of a sorting algorithm:

\[
\begin{align*}
[2, 4, 5, 6, 3, 1, 7] \\
[2, 4, 5, 3, 1, 6, 7] \\
[2, 4, 3, 1, 5, 6, 7] \\
[2, 3, 1, 4, 5, 6, 7] \\
[2, 1, 3, 4, 5, 6, 7] \\
[1, 2, 3, 4, 5, 6, 7]
\end{align*}
\]

Which sorting algorithm is being executed?

(a) bubble sort
(b) selection sort
(c) insertion sort

3. The list \([4, 2, 5, 6, 7, 3, 1]\) is shown below after each pass of a sorting algorithm:

\[
\begin{align*}
[4, 2, 5, 6, 7, 3, 1] \\
[2, 4, 5, 6, 7, 3, 1] \\
[2, 4, 5, 6, 7, 3, 1] \\
[2, 4, 5, 6, 7, 3, 1] \\
[2, 4, 5, 6, 7, 3, 1] \\
[2, 4, 5, 6, 7, 3, 1] \\
[1, 2, 3, 4, 5, 6, 7]
\end{align*}
\]

Which sorting algorithm is being executed?

(a) bubble sort
(b) selection sort
(c) insertion sort
4. List $[8, 2, 8, 7, 3, 1, 2]$ is being sorted using bubble sort. Fill in the blanks to show the list after each pass.

   After the 1st pass: $[2, 8, 7, 3, 1, 2, 8]$
   After the 2nd pass: $[2, 7, 3, 1, 2, 8, 8]$
   After the 3rd pass: $[2, 3, 1, 2, 7, 8, 8]$
   After the 4th pass: $[2, 1, 2, 3, 7, 8, 8]$
   After the 5th pass: $[1, 2, 3, 7, 8, 8]$
   After the 6th pass: $[1, 2, 3, 7, 8, 8]$

5. List $[1, 5, 8, 7, 6, 1, 7]$ is being sorted using selection sort. Fill in the blanks to show the list after each pass.

   After the 1st pass: $[1, 5, 8, 7, 6, 1, 7]$
   After the 2nd pass: $[1, 1, 8, 7, 6, 5, 7]$
   After the 3rd pass: $[1, 1, 5, 7, 6, 8, 7]$
   After the 4th pass: $[1, 1, 5, 6, 7, 8, 7]$
   After the 5th pass: $[1, 1, 5, 6, 7, 8, 7]$
   After the 6th pass: $[1, 1, 5, 6, 7, 8, 7]$
   After the 7th pass:

6. List $[6, 8, 2, 1, 1, 9, 4]$ is being sorted using insertion sort. Fill in the blanks to show the list after each pass.

   After the 1st pass: $[6, 8, 2, 1, 1, 9, 4]$
   After the 2nd pass: $[6, 8, 2, 1, 1, 9, 4]$
   After the 3rd pass: $[2, 6, 8, 1, 1, 9, 4]$
   After the 4th pass: $[1, 2, 6, 8, 1, 9, 4]$
   After the 5th pass: $[1, 1, 2, 6, 8, 9, 4]$
   After the 6th pass: $[1, 1, 2, 6, 8, 9, 4]$
   After the 7th pass: $[1, 1, 2, 4, 6, 8, 9]$