



Questions: (* questions can be used for evaluation)

1. Sort the numbers in ascending order

| | | | | | | | | |
|---|---|----|----|---|---|---|---|---|
| 7 | 9 | 11 | 13 | 6 | 2 | 4 | 3 | 5 |
|---|---|----|----|---|---|---|---|---|

Answer

| | | | | | | | | |
|---|---|---|---|---|---|---|----|----|
| 2 | 3 | 4 | 5 | 6 | 7 | 9 | 11 | 13 |
|---|---|---|---|---|---|---|----|----|

2. Write the steps for arranging 3 numbers in ascending order?
8, 7, 6

| | | | |
|--------|---|---|---|
| | 8 | 7 | 6 |
| Step1 | 8 | 7 | 6 |
| Swap | 7 | 8 | 6 |
| Step 2 | 7 | 8 | 6 |
| Swap | 7 | 6 | 8 |
| Step 3 | 7 | 6 | 8 |
| Swap | 6 | 7 | 8 |

Step 1 : Compare 8 and 7

If $8 > 7$ swap numbers 8 and 7

Step 2 : Compare 8 and 6

If $8 > 6$ swap numbers 8 and 6

Step 3 : Compare 7 and 6

If $7 > 6$ swap numbers 7 and 6

3. How can you sort the numbers in descending order using the same algorithm?
Should the robot use a different approach to compare this time?
Write the steps for the following numbers
6,7,8



Sorting

Work Sheet: 08-ALG-01-WS

| | 6 | 7 | 8 |
|------------|---|---|---|
| Step1 | 6 | 7 | 8 |
| Swap | 6 | 7 | 8 |
| Step 2 | 6 | 7 | 8 |
| Don't Swap | 6 | 7 | 8 |
| Step 3 | 6 | 7 | 8 |
| Swap | 6 | 7 | 8 |

Step 1 : Compare 6 and 7

If $6 < 7$ swap numbers 6 and 7

Step 2 : Compare 7 and 8

If $7 < 8$

Since $7 < 8$ don't swap them since 7 is < 8 already

Step 3 : Compare 7 and 8

If $7 < 8$

Since $7 < 8$ don't swap them since 7 is < 8 already