Question 1: Logic for a program that prints every number from 10 to 1

# Input Processing Output

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Counter | Decrement by 1 | Print 10 to 1 |

# Pseudocode

|  |  |
| --- | --- |
| 1 | START |
| 2 | counter = 10 |
| 3 | WHILE counter > =1 |
| 4 | Print counter |
| 5 | counter = counter -1 |
|  | ENDWHILE |
| 6 | **END** |

# Desk Checking

|  |  |  |
| --- | --- | --- |
| Step | Counter | Print |
| 2 | 10 |  |
| 3 | True |  |
| 4 |  | 10 |
| 5 | 9 |  |
| 3 | True |  |
| 4 |  | 9 |
| 5 | 8 |  |
| 3 | True |  |
| 4 |  | 8 |
| 5 | 7 |  |
| 3 | True |  |
| 4 |  | 7 |
| 5 | 6 |  |
| 3 | True |  |
| 4 |  | 6 |
| 5 | 5 |  |
| 3 | True |  |
| 4 |  | 5 |
| 5 | 4 |  |
| 3 | True |  |
| 4 |  | 4 |
| 5 | 3 |  |
| 3 | True |  |
| 4 |  | 3 |
| 5 | 2 |  |
| 3 | True |  |
| 4 |  | 2 |
| 5 | 1 |  |
| 3 | True |  |
| 4 |  | 1 |
| 5 | 0 |  |
| 3 | False |  |
| 4 |  | End |

Question 2: Logic for a program that prints every number from 10 to 15

# Input Processing Output

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Counter | Decrement by 2 | Print 10 to 15 |

# Pseudocode

|  |  |
| --- | --- |
| 1 | START |
| 2 | counter = 10 |
| 3 | WHILE counter > =15 |
| 4 | Print counter |
| 5 | counter = counter + 2 |
|  | ENDWHILE |
| 6 | **END** |

|  |  |  |
| --- | --- | --- |
| Step | Counter | Print |
| 2 | 10 |  |
| 3 | True |  |
| 4 |  | 10 |
| 5 | 12 |  |
| 3 | True |  |
| 4 |  | 12 |
| 5 | 14 |  |
| 3 | True |  |
| 4 |  | 14 |
| 5 | 16 |  |
| 3 | False |  |
| 4 |  | End |

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