

Print 1 to N / N to 1

→ Base Case - Hypothesis - Induction

Flow:

Methods To Think for a Recursive Problem

Why making IP smaller is Popular Imp.

Print 1 to N → Recursive

Decision making → IP smaller X

Popular

4 Approaches → Recursive

1) Recursive tree - DP/OP method (Decisions)

2) BC - Induction - Hypothesis (Making IP smaller)

3) Choice Region (DP)

4) X

Recursive Problem → Hypothesis

Recursive Form → $Solve(n) = 1 \text{ to } n$

Induction

Base Case

1) Smaller valid IP

2) S.F. Invalid IP

valid

Invalid

Output

Print 1 to N

loop X

Already

Foundation

PS IP OP
n 1 2 3 4 → n
7 1 2 3 4 5 6 7

hard

convert

Step Hypothesis Region

Induction (n) (n)

Print (7) = 1 2 3 4 5 6 7

Print (6) = 1 2 3 4 5 6

IBH

Method

Tree

Linked list

Induction

Print(n) = 1 2 3 → n

Print(n-1) = 1 to n-1

Induction

Print(n)

1 to n

Print(n-1)

1 to n-1

Base Case

1 2 3 4 5 6 7 8 9 10

1

NOT unit

if (n == 1) return 1

Smaller valid

unit 0

1 to 10

void Print (int n)

if (n == 1) return 1

Print(n) → 1 to n

Print(n-1) (1 to n-1)

Print(n-1)

Base Case

Recursive Tree

IBH

4 5 6 7

0/p

Print (7)

Print (6)

Recursive

0/p 0/p 0/p

Method

Recursive

Recursive

Snippet

Area

hard

IBH

Choice Region

Print (7)

Print (6)

Print (5)

Print (4)

Print (3)

Print (2)

Print (1)

Print (0)

Print (-1)

Print (-2)

Print (-3)

Print (-4)

Print (-5)

Print (-6)

Print (-7)

Print (-8)

Print (-9)

Print (-10)

Print (-11)

Print (-12)

Print (-13)

Print (-14)

Print (-15)

Print (-16)

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