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Sairam

Date
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Part-C.

Q.2] Pseudocode for Backtracking:
Its of 2 types:-
(1) Recursive Backtracking solution
(2) Finding whether solution exists or not.

(1) Recursive:

```
void findsoln(n, other params):
    if(found a solution):
        solnfound = solnfound + 1;
        displaysoln();
    if(solnfound >= solntarget):
        system.exit(0);
    return
for(val = first to last):
    if(isvalid(val,n)):
        applyvalue(val,n);
        findsoln(n+1, otherparams);
        removeValue(val,n);
```

(2) Finding if solution exists:

```
boolean findsoln(n, otherparams):
    if(found a solution):
        displaysolution();
    return True;
for(val = first to last):
    if(isvalid(val,n)):
        if(findsoln(n+1, otherparams))
            return True;
        removevalue(val,n);
    return False;
```

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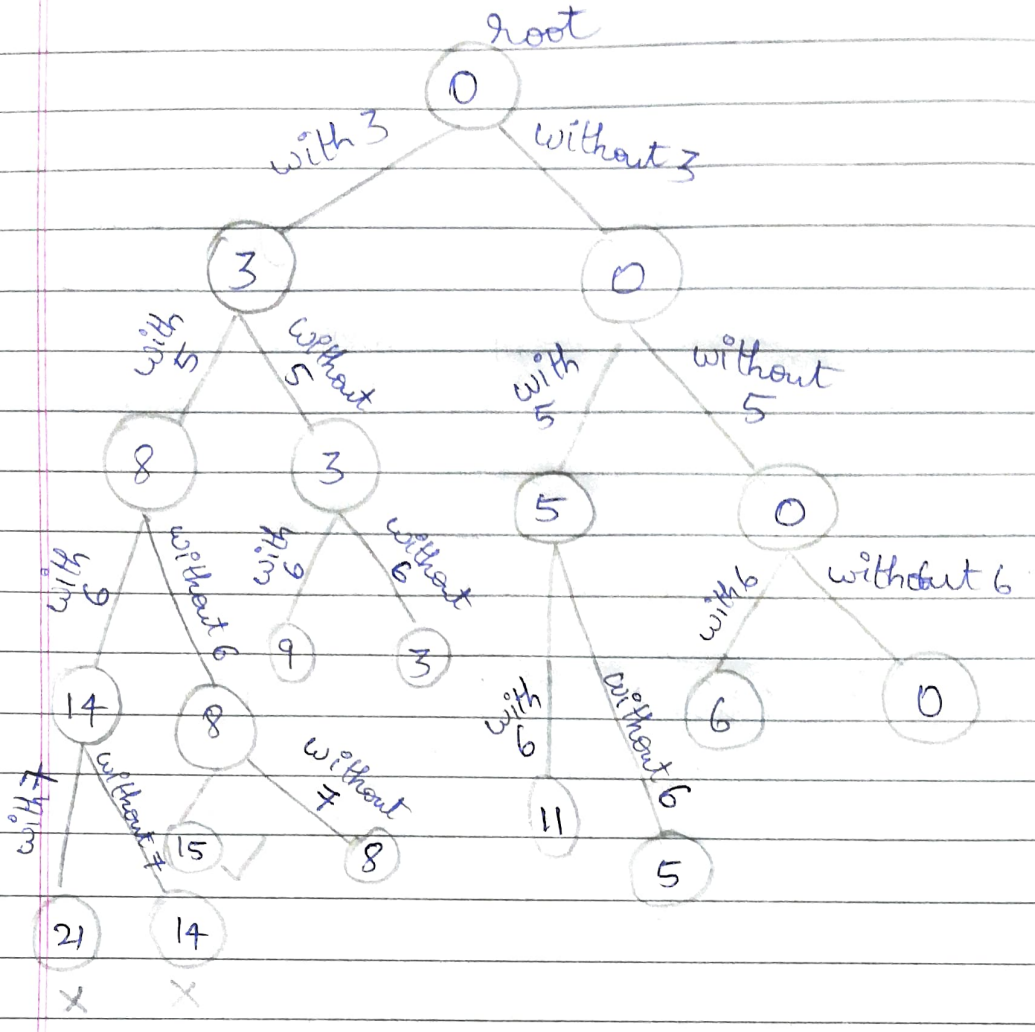
→ Given: $W = \{3, 5, 6, 7\}$

$m = 15$



Solution:- With 3 ✓

With 5 ✓

Without 6

With 7 ✓

∴ $3 + 5 + 7 = 15$