

Date: \_\_\_\_\_

Q13: N-M size die hard jug problem.

### IPO

| Input  | Process  | Output   |
|--|--|--|
| <ul style="list-style-type: none"> <li>M size Jug</li> <li>N size Jug</li> <li>Desired Q quantity</li> </ul> | <ol style="list-style-type: none"> <li>Calculate GCD of M and N.</li> <li>Check if Q is multiple of GCD calculated.</li> <li>Check if Q is less than, or equal to larger sized jug.</li> <li>Calculate if Q can be measured with M sized Jug &amp; N sized Jug.</li> </ol> | <ol style="list-style-type: none"> <li>Possible</li> <li>Not possible</li> </ol> |

### PSEUDOCODE

START

INPUT M size Jug

INPUT N size Jug

Desired Q quantity

Calculate GCD of M and N: AND  $Q \leq N$

IF  $Q \% \text{GCD} == 0$  AND  $Q \leq M$  THEN  
PRINT "possible"

ELSE

PRINT "Not possible"

END



# FLOWCHART

Date: \_\_\_\_\_

