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| 1 | (x, y) is X<4 ->(4, Y) | Fill the 4-liter jug |
| 2 | (x, y) if Y<3 -> (x, 3) | Fill the 3-liter jug |
| 3 | (x, y) if x>0 -> (x-d, d) | Pour some water out of the 4-liter jug. |
| 4 | (x, y) if Y>0 -> (d, y-d) | Pour some water out of the 3-liter jug. |
| 5 | (x, y) if x>0 -> (0, y) | Empty the 4-liter jug on the ground |
| 6 | (x, y) if y>0 -> (x,0) | Empty the 3-liter jug on the ground |
| 7 | (x, y) if X+Y >= 4 and y>0 -> (4, y-(4-x)) | Pour water from the 3-liter jug into the 4-liter jug until the 4-liter jug is full |
| 8 | (x, y) if X+Y>=3 and x>0 -> (x-(3-y), 3)) | Pour water from the 4-liter jug into the 3-liter jug until the 3-liter jug is full. |
| 9 | (x, y) if X+Y <=4 and y>0 -> (x+y, 0) | Pour all the water from the 3-liter jug into the 4-liter jug. |
| 10 | (x, y) if X+Y<=3 and x>0 -> (0, x+y) | Pour all the water from the 4-liter jug into the 3-liter jug. |
| 11 | (0, 2) -> (2, 0) | Pour the 2-liter water from the 3-liter jug into the 4-liter jug. |
| 12 | (2, Y) -> (0, y) | Empty the 2-liter in the 4-liter jug on the ground. |

The following are the production rules