Algorithm 1 Recursive route-counting function

```
function countRoutes(m, n)
    if n=0 OR m=0
        return 1
    end
    return countRoutes(m, n - 1) + countRoutes(m - 1, n)
end
```

Algorithm 2 Recursive route-counting function

```
cache ← Dict()

function countRoutes(m,n)
    if n = 0 OR m = 0
        return 1
    end

    try
        return cache[(m, n)]
    end

    cache[(m, n)] ← countRoutes(m, n - 1) + countRoutes(m - 1, n)
    return cache[(m, n)]
end
```