

# CLRS 15.1-4

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Thanks, Åsmund Eldhuset [1];  $r_i$  can be generalized followingly:

$$r_i(n) = r_1(n) = r_2(n) \quad (15.1), (15.8) \quad (1)$$

Similarly:

$$r_i(n) = r_1(j+1) + r_2(j+1) = 2r_i(j+1) \quad (1), (15.9) \quad (2)$$

Thus:

$$r_1(n) = r_2(n) = r_i(n) = 2^{n-n} = 1 \quad (15.8), (15.1-4) \quad (3)$$

Lastly:

$$r_i(j) = 2r_i(j+1) \quad (2) \quad (4)$$

$$= 2 \cdot 2^{n-(j+1)} \quad (4), (15.1-4) \quad (5)$$

$$= 2^{1+n-j-1} \quad (6)$$

$$= 2^{n-j} \quad (7)$$

$$(8)$$

## References

- [1] Åsmund Eldhuset. Løsningsforslag til kapittel 15 i. <http://www.idi.ntnu.no/~algdatt/notater/2007/1f-kap15.pdf>, 2007.