

**Theoretic accumulative number of comps in successful searches
in an N-element array**

$$(((N+1)*(\text{int})(\text{Math.ceil}(\text{Math.log}(N+1)/\text{Math.log}(2))))-2*\text{maxpower2}(N)+1))$$

$$(N+1)\lceil \log_2(N+1) \rceil - 2 \times 2^{\lfloor \log_2 N \rfloor} + 1$$

$$(N+1)(\lfloor \log_2 N \rfloor + 1) - 2^{\lfloor \log_2 N \rfloor + 1} + 1$$

$$(N+1)\lfloor \log_2 N \rfloor - 2^{\lfloor \log_2 N \rfloor + 1} + 2 + N$$

$$\sum_{i=1}^N \lfloor \log_2 i \rfloor + N$$

$$(N+1)(\lg(N+1) + \varepsilon(N+1)) - 2N + N$$

$$(N+1)(\lg(N+1) + \varepsilon(N+1)) - N$$

**Theoretic accumulative number of comps in unsuccessful searches
in an N-element array**

$$(((N+1)*(\text{int})(\text{Math}.\text{ceil}(\text{Math}.\text{log}(N+1)/\text{Math}.\text{log}(2))))-2*\text{maxpower2}(N)+N+1))$$

$$(N+1)\lceil \log_2(N+1) \rceil - 2 \times 2^{\lfloor \log_2 N \rfloor} + N + 1$$

$$(N+1)(\lfloor \log_2 N \rfloor + 1) - 2^{\lfloor \log_2 N \rfloor + 1} + N + 1$$

$$(N+1)\lfloor \log_2 N \rfloor - 2^{\lfloor \log_2 N \rfloor + 1} + 2 + 2N$$

$$\sum_{i=1}^N \lfloor \log_2 i \rfloor + 2N$$

$$(N+1)(\lg(N+1) + \varepsilon(N+1)) - 2N + 2N$$

$$(N+1)(\lg(N+1) + \varepsilon(N+1))$$