

(b)

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for(int i = 1; i < n; i++)  
  for(int k = 1; k <= n; k++)  
    if(A[k] == 1) {
```

```
      for(int m = 1; m <= n; m = 2*m)
```

```
        O(1) {
```

$$\sum_{i=0}^{n-2} \sum_{k=0}^{n-1} \left(\sum_{m=0}^{\log_2 n} \right)$$

$$\begin{cases} m = 2^m \Rightarrow 2^n \\ 2^m \leq n \end{cases}$$

$$\Rightarrow (n-2)(n-1)(\log_2 n)$$

if statement $2^n \leq n$

$$n \leq \log(n)$$

$$\Rightarrow n^2 \Rightarrow \Theta(n^2)$$