

where  $N \geq 1$ .

3. By Theorem 11 of [1]

$$(14) \quad \begin{cases} N \in (a) \Leftrightarrow 0 < \left\{ \frac{N}{\alpha^2} \right\} < \frac{1}{2}, \\ N \in (b) \Leftrightarrow \frac{1}{\alpha} < \left\{ \frac{N}{\alpha^2} \right\} < 1, \end{cases}$$

where  $\{x\}$  denotes the fractional part of  $x$ . The possibility  $\{N/\alpha^2\} = 1/\alpha$  never occurs.

We should like to point out that (14) can be replaced by the following slightly simpler criterion.

$$(15) \quad \begin{cases} N \in (a) \Leftrightarrow \{\alpha N\} > \frac{1}{\alpha^2} \\ N \in (b) \Leftrightarrow \{\alpha N\} < \frac{1}{\alpha^2} \end{cases} .$$

As above,  $\{\alpha N\} = 1/\alpha^2$  is impossible.

To see that (14) and (15) are equivalent, it suffices to observe that

$$\left\{ \frac{N}{\alpha^2} \right\} = \{(2 - \alpha)N\} = 1 - \{\alpha N\} .$$

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