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$$r(V_n + V) \leq V a - f + a \Rightarrow f a + f \leq f a - f \Rightarrow 1, a \leq -1 \Rightarrow a \leq \frac{-1}{1} = -\frac{1}{\omega}$$

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$$\sqrt{r+\sqrt{r}} + \frac{1}{\sqrt{r+\sqrt{r}}} + \sqrt{r-\sqrt{r}} + \frac{1}{\sqrt{r-\sqrt{r}}} + f + r\sqrt{f} + f$$

$$A^r = (\sqrt{r+\sqrt{r}} + \sqrt{r-\sqrt{r}})^r = \sqrt{f}$$

$$A^r \leq r + \sqrt{r} + r - \sqrt{r} + r$$

$$A^r \leq f$$

$$A \leq \sqrt{f}$$

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$$rF(n) - rF(-n) = f a^{r-n}$$

$$rF(-n) - rF(n) = f a^{r+n}$$

$$fF(n) - rF(-n) = 1 a^{r-n}$$

$$+ fF(-n) - rF(n) = 1 a^{r+n}$$

$$-aF(n) \leq \frac{f a^{r-n}}{r-n}$$

$$F(n) \leq \frac{f a^{r-n}}{r-n}$$

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$$a + rF(\cdot) = (r + r m + r m - 1) \leq rF(\cdot) = 1 a + a m \Rightarrow F(\cdot) \leq \frac{1 a + a m}{r} \Rightarrow m \leq -r$$

$$rF(\cdot) \leq r m - 1 = f \left(\frac{r m - 1}{r} \right) \Rightarrow m \leq -$$

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$$\Rightarrow \frac{r m - 1}{r} \leq \frac{1 a + a m}{r} \Rightarrow 1 a - r \leq r + 1 \cdot m$$

$$1 a m \leq r m$$

$$m \leq \frac{r m}{1} = \frac{1}{r}$$

$$\Rightarrow rF(\cdot) = r \left(\frac{1}{r} \right) - 1 = \frac{r}{r} - \frac{1}{r} = \frac{r-1}{r} \leq rF(\cdot) = \left[\frac{r-1}{r} \leq rF(\cdot) \right]$$

$$f(n) = a n + b \quad \frac{f}{n} = \frac{a n^2 + a + r b n}{n} \leq \frac{r n^2 - 1 r a + r}{n}$$

$$f\left(\frac{1}{n}\right) = \frac{a}{n} + b$$

$$\Rightarrow a \leq r, b \leq -r$$

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$$F(n) \leq \frac{r}{n}$$

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$$(-1) a^{r-n} = \frac{f}{n}$$