Then $\lim_{n\to\infty} x_n = \mathbb{Z}$ Then $\lim_{n\to\infty} x_n = \lim_{n\to\infty} \left[\frac{1}{2}(x_{n+1} + x_{n+1})\right]$ $\lim_{n\to\infty} x_n = \lim_{n\to\infty} \left[\frac{1}{2}(x_{n+1} + x_{n+1})\right]$ Become: $\mathbb{Z} = \frac{1}{2} \left[\lim_{n\to\infty} x_{n+1} + y \lim_{n\to\infty} x_{n+1}\right]$ $\mathbb{Z} = \frac{1}{2} \left[\lim_{n\to\infty} x_{n+1} + y \lim_{n\to\infty} x_{n+1}\right]$ $\mathbb{Z} = \frac{1}{2} \left[\lim_{n\to\infty} x_n + y \lim_{n\to\infty} x_n + y$
Then $\lim_{n\to\infty} x_n = \lim_{n\to\infty} \left[\frac{1}{2}(x_{n-1} + \frac{1}{2}x_{n-1})\right]$ Become: $Z = \frac{1}{2} \left[\lim_{n\to\infty} x_{n-1} + \frac{1}{2}\lim_{n\to\infty} x_{n-1}\right]$ $Z = \frac{1}{2} \left[\frac{1}{2} + \frac{1}{2}\right]$ $Z = \frac{1}{2} \left[\frac{1}{2}$
Become: $Z = \frac{1}{2} \left[ \lim_{n \to \infty} x_{n-1} + y \lim_{n \to \infty} x_{n-1} \right]$ $Z = \frac{1}{2} \left[ Z + y/z \right]$ $Z = y/z$ $Z = y$
Become: $Z = \frac{1}{2} \left[ \lim_{n \to \infty} x_{n-1} + y \lim_{n \to \infty} x_{n-1} \right]$ $Z = \frac{1}{2} \left[ Z + y/z \right]$ $Z = y/z$ $Z = y$
$Z = \frac{1}{2} \left[ Z + \frac{1}{2} \right]$ $2Z = Z + \frac{1}{2}$ $Z = \frac{1}{2} $
$Z = \frac{1}{2} \left[ Z + \frac{1}{2} \right]$ $2Z = Z + \frac{1}{2}$ $Z = \frac{1}{2} $
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
$Z = \frac{1}{2}$
Z = 49 $Z = 49$ $Z$
Im $x_n = Jy$ $x \to \infty$ (3) Since $y \ge 1$ , then $a_{n-1} > a_n > a_{n+1}$ So, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n-1} + \frac{y}{x_{n-1}})$ $a_n = \frac{1}{2}(a_{n-1} + \frac{y}{a_{n-1}})$ $a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ $a_n \ne a_{n-1} + \frac{y}{a_{n-1}} > a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ Also Based on part 2, the sequence bounded at $a_n > a_n >$
(3) Since $y \ge 1$ , then $a_{n-1} > a_n > a_{n+1}$ 50, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n+1} + \frac{y}{x_{n+1}})$ $a_n = \frac{1}{2}(a_{n+1} + \frac{y}{a_{n+1}})$ $a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ $a_n > a_{n+1}$ $\frac{1}{2}(a_{n-1} + \frac{y}{a_{n+1}}) > a_n + \frac{y}{a_n}$ Also Based on part 2, the sequence bounded at $\frac{1}{2}$ it has a lower boundary.
(3) Since $y \ge 1$ , then $a_{n-1} > a_n > a_{n+1}$ So, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n-1} + \frac{y_{n-1}}{x_{n-1}})$ $a_n = \frac{1}{2}(a_{n-1} + \frac{y_{n-1}}{y_{n-1}})$ $a_n > a_{n+1}$ $a_n > a_{n+1}$ $a_n > a_{n+1}$ Also Based on part 2, the sequence bounded at $a_n > a_n$ it has a lower boundary.
(3) Since $y \ge 1$ , then $a_{n-1} > a_n > a_{n+1}$ 50, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n+1} + \frac{y}{x_{n+1}})$ $a_n = \frac{1}{2}(a_{n+1} + \frac{y}{a_{n+1}})$ $a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ $a_n > a_{n+1}$ Also Based on part 2, the sequence bounded at $a_n > a_n$ it has a lower boundary.
SO, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n+1} + \frac{y}{x_{n+1}})$ $a_n = \frac{1}{2}(a_{n+1} + \frac{y}{a_{n+1}})$ $a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ $a_n > a_{n+1}$ $a_n > a_{n+1}$ $a_n > a_{n+1} > a_n = a_n$ Also Based on part 2, the sequence bounded at $a_n > a_n$ it has a lower boundary.
SO, the sequences is a monotonic decrease.  Because, $x_n = \frac{1}{2}(x_{n-1} + \frac{y}{x_{n-1}})$ $a_n = \frac{1}{2}(a_{n-1} + \frac{y}{a_{n-1}})$ $a_{n+1} = \frac{1}{2}(a_n + \frac{y}{a_n})$ $a_n > a_{n+1}$ $a_n > a_{n+1}$ $a_n > a_{n+1} > a_n = a_n$ Also Based on part 2, the sequence bounded at $a_n > a_n$ it has a lower boundary.
Because, $x_n = \frac{1}{2}(x_{n-1} + \frac{y}{x_{n-1}})$ $a_n = \frac{1}{2}(a_{n-1} + \frac{y}{a_{n-1}})$ $a_n > a_{n+1}$ $a_n > a_n > a_n$ Also Based on part 2, the sequence bounded at $a_n > a_n$ it has a lower boundary.
an = \(\frac{1}{2}(an+\frac{1}{2}an+1)\) ant = \(\frac{1}{2}(an+\frac{1}{2}an)\) \[ \frac{1}{2}(an-1+\frac{1}{2}an-1)\) \(\frac{1}{2}(an+\frac{1}{2}an)\) \[ \frac{1}{2}(an-1+\frac{1}{2}an-1)\) \(\frac{1}{2}(an+\frac{1}{2}an)\) \[ \frac{1}{2}(an+\frac{1}{2}an-1)\] \[ \fr
an 7, ant)  \( \frac{1}{2}(an-1+\frac{7}{2}an-1) \) 7, a\frac{1}{2}(an+\frac{9}{2}an)  Also Based on part 2, the sequence bounded at dy,  it has a lower boundary.
z(an-1+ Yan-1) 7/ az (an + Yan)  Also Based on part 2, the sequence bounded at Jy, it has a lower boundary.
Also Based on part 2, the sequence bounded at Ty, it has a lower boundary.
it has a lower boundary.
it has a lower boundary.
140 11
50, It a sequence monotonic derrease, and has a
lower boundary. It's limit exist.