Some details for Lec. 7, slides #11,12:

Factoring:
$$[1-r^2(1-x)(1-rx+rx^2)]$$

= $(x-\frac{r-1}{r})(ax^2+bx+e)$ ----(*)

Expanding the left hand side of (*):

 $r^3x^3-2r^3x^2+r^2(1+r)x+(1-r^2)$ ----(i)

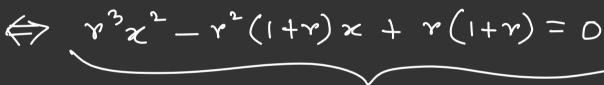
Expanding the right hand side of (*):

 $a \times^{3} + \left(b - a \cdot \frac{\gamma - 1}{\gamma}\right) \times^{2} + \left(c - b \cdot \frac{\gamma - 1}{\gamma}\right) \times$

 $-\frac{\mathcal{C}(\gamma-1)}{\gamma}=0---(ii)$

Equate the coefficients of like powers of x from (i) and (ii), to obtain: $\left\{\alpha = \gamma^3\right\}$ $b - a \cdot \frac{r-1}{r} = -2r^3$ $b = -r^2(1+r)$ $= \gamma^2 (1+\gamma)$ $C = \gamma (1+\gamma)$

... The quadratic expression in Lec. #7, \$.12 is:
$$ax^2+bx+c=r^3x^2-r^2(1+r)x+r(1+r)$$
... Period 2 points are solutions of:



 $ax^2 + bx + c = 0$

$$\chi = \frac{\gamma^{2}(1+\gamma) + \sqrt{\gamma^{4}(1+\gamma)^{2} - 4.\gamma^{3} \gamma(1+\gamma)}}{2}$$

$$\frac{2 r^{3}}{2 r^{3}} = \frac{\gamma + 1 \pm \sqrt{(r-3)(r+1)}}{2 r}$$

$$\frac{2 r^{3}}{\sqrt{1}}$$

$$\frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac$$