

0,21

$$x^2 - 2x + m^2 - m = 0$$

$$x_1^3 - x_2^2 + x_2^3 - x_1^2 < 5$$

$$(x_1^3 + x_2^3) - (x_1^2 + x_2^2) < 5$$

$$(x_1 + x_2)(x_1^2 - x_1 x_2 + x_2^2) - [(x_1 + x_2)^2 - 2x_1 x_2] < 5$$

$$2(4 - 3(m^2 - m)) - [4 - 2(m^2 - m)] < 5$$

$$8 - 6m^2 + 6m - 4 + 2m^2 - 2m < 5$$

$$-4m^2 + 4m - 1 < 0$$

$$-(2m - 1)^2 < 0$$

$$m \neq \frac{1}{2}$$

(2)

$\Delta > 0$ (1) (2)

$$4 - 4(m^2 - m) > 0$$

$$-4(m^2 - m + 1) > 0$$



∴ $1/2 < m < 1/2$

$$\frac{1-\sqrt{5}}{2} < m < \frac{1}{2}$$

$$1/2 < m < \frac{1+\sqrt{5}}{2}$$