

$$\Rightarrow xRy \Leftrightarrow \exists t \in \mathbb{Z} \quad x^3 - y^3 = 5t$$

$$1) \quad xRy \Rightarrow x^3 - y^3 = 5t$$

$$y^3 - x^3 = -( )$$

$$xRy \wedge yRz$$

$$\underline{x^3 - y^3 = 5t} \quad \wedge \quad \underline{y^3 - z^3 = 5l}$$

$$x^3 - z^3 = 5(t - l)$$

$$2) \quad a \in \mathbb{Z}$$

$$x \equiv y \pmod{m}$$

$$\bar{a} = \{x \in \mathbb{Z} \mid xR a\}$$

$$xR a \Leftrightarrow x^3 - a^3 = 5l \Leftrightarrow \underline{x^3} = \underline{5l} + \boxed{a^3}$$

$$\bar{0} = \{x \in \mathbb{Z} \mid xR 0\} \Leftrightarrow \underline{x^3} = \underline{5l}$$

$$\Rightarrow \bar{0} = \{0, \pm \underline{5}, \pm \underline{10}, \pm \underline{15}, \dots\}$$

$$\bar{1} = \{x \in \mathbb{Z} \mid xR 1\} \Leftrightarrow \underline{x^3} = \underline{5l} + \underline{1}$$

$$\bar{1} = \{1, \dots\}$$

$$l=1 \Rightarrow \underline{x^3 = 6}$$

$$l=2 \Rightarrow \underline{x^3 = 11}$$

$$2 \in \bar{2} = \{x \in \mathbb{Z} \mid x \cap 2\} \Leftrightarrow x^3 = 5l + 2^3$$

$$x^3 = 5l + 8 =$$

$$x^3 = 5l + 5 + 3$$

$$\underline{x^3 = 5(l+1) + 3}$$

$$3 \in \bar{3} = \{x \in \mathbb{Z} \mid x \cap 3\} \Leftrightarrow x^3 = 5l + 3^3$$

$$x^3 = 5l + 25 + 2$$

$$\underline{x^3 = 5(l+5) + 2}$$

$$4 \in \bar{4} = \{x \in \mathbb{Z} \mid x \cap 4\} \Leftrightarrow x^3 = 5l + 4^3$$

$$x^3 = 5(l+52) + 4 \quad \neq$$

$$0 \in \bar{5} \Leftrightarrow x^3 = 5l + 5^3 = 5(l + 5^2)$$

$$\bar{6} \Leftrightarrow x^3 = 5l + 6^3 = 5l + \underline{216} = \underline{5(l+43)} + \underline{1}$$

$216 \quad e = -99!$

$$x=1 \Rightarrow 1 \in \bar{6} \Rightarrow \bar{1} = \bar{6}$$