$\ulcorner$

$$\wp'(z) = -\frac{2}{z^3} + 2az + 4bz^3 + [5]$$
$$= -\frac{2}{z^3} + 2az + 4bz^3 + z^5$$
$$(\wp'(z))^2 = \left(-\frac{2}{z^3} + 2az + 4bz^3 + z^5\right)^2$$
$$= \frac{4}{z^6} + \frac{-8a}{z^2} - 16b + [2].$$

$\lrcorner$

from which we deduce that $\wp$ and $\wp'$ satisfy the relation

$$\wp'^2 = 4\cdot\wp^3 - 20a\cdot\wp - 28b;$$

it is conventional to write g_2 for $20a$ and g_3 for $28b$.

$\ulcorner$ $(\wp')^2 = \frac{4}{z^6} - \frac{8a}{z^2} - 16b + [2]$

$$4\wp^3 - 20a\wp - 28b = 4\frac{1}{z^6} + \frac{12a}{z^2} + 12b + [2]$$
$$-20a\left(\frac{1}{z^2} + az^2 + bz^4\right) + [6] + (-28)b$$
$$= \frac{4}{z^6} - \frac{8a}{z^2} - 28b + [2] + [6] - 20az^4$$
$$= \frac{4}{z^6} - \frac{8a}{z^2} - 28b + [2].$$

$\Rightarrow$ $\wp'^2 - 4\wp^3 + 20a\wp + 28b = [2]$.

$\Rightarrow$ $\wp'^2 - 4\wp^3 + 20a\wp + 28b$ is holomorphic on $\mathbb{C}$ and at p_0, is equal to 0. $\Rightarrow$ $\wp'^2 - 4\wp^3 + 20a\wp + 28b = 0$ $\lrcorner$

Now the holomorphic map

$$\varphi : \mathbb{C}/\Lambda \longrightarrow \mathbb{P}^2$$