On the Brich and Swinnerton-Dyer conjecture

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The elliptic curve be: $y^2 = x^3 + ax + b$.

Now pointing P(0, 1) and Q(1, 2) on the curve,

which are become two equations set:

$$\begin{cases} 1^2 = 0^3 + a \times 0 + b \\ 2^2 = 1^3 + a \times 1 + b \end{cases}$$

By the next step, $a = 2$ and $b = 1$.

and the elliptic curve is become:

$$y^2 = x^3 + 2x + 1 \quad .$$

but now, let $x = \cos\theta$ and $y = \sin\theta$.

By the next step, the elliptic curve is:

$$\sin^2\theta = \cos^3\theta + 2\cos\theta + 1 \quad .$$

because $\sin^2\theta + \cos^2\theta = 1$,

the elliptic curve become:

$$1 - \cos^2\theta = \cos^3\theta + 2\cos\theta + 1 \quad ,$$

By the next step, the elliptic curve is:

$$\cos^2\theta + \cos\theta + 2 = 0 \quad ,$$

By the next step, the elliptic curve is :

$$\left(\cos\theta + \frac{1}{2}\right)^2 - \frac{1}{4} + 2 = 0 \quad ,$$

By the next step, $\cos\theta = \frac{1}{2}(\pm\sqrt{7}i - 1)$.

But now, let $\pm\sqrt{7}i - 1 = 1$,

By the next step, $\cos\theta = \frac{1}{2}$, and $\theta = 2k\pi + \frac{\pi}{3}$, $(k = 0,1,2,3,4,\ldots,\infty)$, So, $x = \cos\left(2k\pi + \frac{\pi}{3}\right) = \frac{1}{2}$ and $y = \sin\left(2k\pi + \frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$, $(k = 0,1,2,3,4,\ldots,\infty)$.