$$qn - mr = y\left\{-5000k^3y^3 + (-50p_5^2 + 280p_4k^2)\,y^2 + \left(\frac{2}{5}\,p_4p_5^2 - 1056k^3p_5 - \frac{248}{25}\,p_4^2k^2\right)y + k^3\left(-2048k^4 + \frac{8}{125}\,p_4^3 + \frac{32}{5}\,kp_4p_5\right)\right\};$$

$$vm - 8kq = y\left\{125000y^3 - 3000p_4y^2 + (24p_4^2 + 800kp_5)\,y - \left(-2048k^4 + \frac{8}{125}\,p_4^3 + \frac{32}{5}\,kp_4p_5\right)\right\}.$$

By substituting in (18) these values of $vn - 8kr$, $qn - mr$, $vm - 8kq$, we get

$$F(y) = q_0y^6 + q_1y^5 + \ldots + q_5y + q_6 = 0, \qquad (19)$$

where

$$q_0 = -625000000,$$
$$q_1 = 50000000p_4,$$
$$q_2 = -200000\,(200kp_5 + 11p_4^2),$$
$$q_3 = 102400000k^4 + 1280000kp_4p_5 + 44800p_4^3,$$
$$q_4 = -(25600kp_4^2p_5 + 4096000k^4p_4 + 640000p_5^2k^2 + 448p_4^4),$$
$$q_5 = 8192k^2p_4p_5^2 - 2048\times1856k^5p_5 + 64k^8 + \frac{49152}{5}\,k^4p_4^2 + \frac{6144}{25}\,kp_4^3p_5 + \frac{6784}{3125}\,p_4^5,$$
$$q_6 = -\left(\frac{8}{125}\,p_4^3 - 2048k^4 + \frac{32}{5}\,kp_4p_5\right)^2.$$

§8. Assuming now that the coefficients p_3, p_4, p_5 are commensurable quantities, let the commensurable root y of equation (19) be found. Then a^2z is known. Then, from (11) and (16), t or $\frac{c}{a}$ is found.

§9. At this stage, as was indicated in §3, two courses are open to us. One is to proceed to find u_1^5, u_2^5, u_3^5, u_4^5 without troubling ourselves to inquire what a, c, e, θ, ϕ and h are separately. This, the natural and the shortest course, we will now follow. Since a^2z and $\frac{c}{a}$ are known, their product acz is known. And, by (14), A is known. Therefore $czhe\,(\theta^2 - \phi^2z)$, which, by the last of equations (7), is equal to $-aczA$, is known. Hence by the first of equations (8), B is known. We might even more simply, acz being known, find B from the second of equations (9). The second of equations (8) gives us

$$y\,(B'\sqrt{z}) = 2c\sqrt{z}\,(k^2 - c^2z) + a^2zk\,(a\sqrt{z}) - 2kAa\sqrt{z}. \qquad (20)$$

Now acz is known, and it is the same as $(a\sqrt{z})(c\sqrt{z})$; consequently, the signs