obtaining the values of these quantities which was described in §10, and we will use the present instance for that purpose. To find a we take the equation (25),

$$(\delta A + 2\gamma\tau)^2 = (y - a^2)\{y(2kt + y)(4kt + y) - 2(k^2 + t^2y)^2\}^2. \tag{29}$$

By (14),

$$A = \frac{3y}{4} - \frac{p_4}{20} = -\frac{47}{500}.$$

Also, from the values of k, y and t above given,

$$2kt + y = -\frac{517}{1000},$$

$$4kt + y = -\frac{521}{1000},$$

$$k^2 + t^2y = \frac{47}{1000}.$$

Therefore

$$\delta = ay(4kt + y) - 2y(k^2 + t^2y) = -\frac{521a + 47}{62500},$$

$$\gamma = y(2kt + y) - a(k^2 + t^2y) = \frac{-47(125a + 11)}{125000},$$

$$\tau = k^2 - t^2y = -\frac{1}{500}.$$

Hence (29) becomes

$$125(323a + 29)^2 = 36^2(1 - 125a^2). \tag{30}$$

One root of this equation is $-\frac{11}{125}$. But this root proves on examination to be inadmissible. We must therefore take the other root, which is $-\frac{9439}{25^2\times 13^2}$. Then, since $c = \frac{7a}{4}$, and $a^2z = \frac{1}{125}$, we have

$$a = -\frac{9439}{25^2\times 13^2} = -\frac{9439}{25\times 4225},$$

$$c = -\frac{7\times 9439}{422500},$$

$$z = \frac{5\times 4225^2}{9439^2},$$

$$e = \frac{398}{9439}.$$

The sign of e is determined in the way pointed out in §10. By means of the values of e, z, a, c that have been obtained, we get, from the two equations (26),

$$\theta = \frac{125}{199},\ \phi = -\frac{18\times 9439}{199\times 845}\ \therefore\ \theta^2 - \phi^2 z = -\frac{125}{199}.$$