To verify this result,

$$\frac{1}{81}(1+\sqrt{2})^5 = 1.012496,$$

$$\frac{1}{81}(1-\sqrt{2})^5 = -.000150535,$$

$$197 + 139\sqrt{2} \ = 393.57568,$$

$$(197 + 139\sqrt{2})^2 = 154901.8,$$

$$197 - 139\sqrt{2} \ = .424315,$$

$$(197 - 139\sqrt{2})^2 = .1800434,$$

$$\sqrt{\left\{(197 + 139\sqrt{2})^2 - \frac{1}{81}(1+\sqrt{2})^5\right\}} = 393.57436,$$

$$\sqrt{\left\{(197 - 139\sqrt{2})^2 - \frac{1}{81}(1-\sqrt{2})^5\right\}} = \quad .180194.$$

Therefore

$$u_1 = 5.888,$$

$$u_4 = \ .412,$$

$$u_2 = 1.502,$$

$$u_3 = -.276,$$

$$\therefore\ x = 7.526.$$

Modification of the Method to Meet Special Cases.

First special case: When p_2 and p_3 are both zero.

§23. When p_2 and p_3 are both zero, a modification of the general method is rendered necessary by the circumstance that the equations (11) and (16), from which y and t are to be found, are then virtually one, and so are insufficient to give us the values of y and t. In fact, they become

$$\left.\begin{aligned} &t\left(50y^3 - \frac{2}{5}p_4y\right) - p_5y = 0 \\ \text{and} \quad &\left\{t\left(50y^3 - \frac{2}{5}p_4y\right) - p_5y\right\}^2 = 0 \end{aligned}\right\} \qquad (39)$$

§24. In an article which appeared in No. 2, Vol. VII of this *Journal*, the present writer showed that, when p_2 and p_3 are both zero, p_4 and p_5 have the forms

$$\left.\begin{aligned} p_4 &= \frac{5n^4(3-m)}{16+m^2} \\ p_5 &= \frac{n^5(22+m)}{16+m^2} \end{aligned}\right\} \qquad (40)$$