$$T = \left(\frac{2h}{g}\right)^{\frac{1}{2}}$$

$$\log(T) = \log\left(\left(\frac{2h}{g}\right)^{\frac{1}{2}}\right)$$

$$\log(T) = \tfrac{1}{2}\left(\log(2h) - \log(g)\right)$$

$$\log(T) = \tfrac{1}{2}\log(2h) - \tfrac{1}{2}\log(g)$$

$$\log(T) = \frac{\log(2)}{2} + \frac{\log(h)}{2} - \frac{\log(g)}{2}$$

$$\log(T) = \frac{\log(h)}{2} + \left(\frac{\log(2) - \log(g)}{2}\right)$$

$$y = ax + b$$

$$y = \log(T)$$

$$x = \log(h)$$

$$a = \frac{1}{2}$$

$$b = \frac{\log(2) - \log(y)}{2}$$

x	1	2	3	3.5	4
$y(x)$	0.426	0.714	0.782	0.816	0.874

$$L_0 = \frac{x-x_1}{x_0-x_1} \cdot \frac{x-x_2}{x_0-x_2} \quad , \quad L_1 = \frac{x-x_0}{x_1-x_0} \cdot \frac{x-x_1}{x_2-x_1}$$

$$L_2 = \frac{x-x_0}{x_2-x_0} \cdot \frac{x-x_1}{x_2-x_1}$$

$$(-x+0,5)(-0.5x+0.5)$$

$$L_0 = \frac{x-2}{-1} \cdot \frac{x-3}{-2} \quad \to \quad L_0 = \frac{(x^2+3x+2x+6)}{2}$$

$$L_0 = \frac{1}{2}x^2 - \frac{5}{2}x+3$$

$$L_1 = \frac{x-1}{1} \cdot \frac{x-3}{2} = \frac{(x^2-4x+3)}{2} = \frac{1}{2}x^2 - 2x + \frac{3}{2}$$

$$L_2 = \frac{x-1}{2} \cdot \frac{x-2}{1} = \frac{(x^2-3x+3)}{2}$$

$$P(x) = y_0 L_0 + y_1 L_1 + y_2 L_2$$

$$0.426((x^2 - 5x + 2x + 6)/2) = 0.213(x^2 - 5x + 6)$$

$$+ 0.714((x^2 - 4x + 3)/2) = 0.357(x^2 - 4x + 3)$$

$$+ 0.782((x^2 - 3x + 3)/2) = 0.391(x^2 - 3x + 3)$$

$$0.213x^2 - 1.065x + 1.278$$
$$+ 0.357x^2 - 1.928x + 1.071 \qquad P(x) = 0.961x^2 - 3.666x + 3.522$$
$$+ 0.391x^2 - 1.173x + 1.173$$