The errors of the interpolation are

Degree	$P_n(1.75)$	Actual Error	$\max\lvert f^{(n+1)}\rvert$	Error Bound	Next-te[rm] rule
1	1,25665	0.01995	0.3679	0.03725	0.0285
2	1,2852	−0.0086			
3	1.2861	−0.0095			

Typically we can expect that a higher degree polynomial will approximate better. But in this case the approximati[on] of the degree 3 polynomial is worse than that of degree 2 polynomial

$$E_1(x,f) = \frac{f''(\xi)}{2!}(x-1.1)(x-2)$$

$$f'(x) = 2xe^{-\frac{x}{2}} - x^2 \cdot \frac{1}{2} e^{-\frac{x}{2}} = \left(2x - \frac{x^2}{2}\right)e^{-\frac{x}{2}}$$

$$f''(x) = (2-x)e^{-\frac{x}{2}} - \frac{1}{2}\left(2x - \frac{x^2}{2}\right)e^{-\frac{x}{2}} =$$

$$= \left(2 - x - x + \frac{x^2}{4}\right)e^{-\frac{x}{2}} = \left(2 - 2x + \frac{x^2}{4}\right)e^{-\frac{x}{2}}$$

$$f'''(x) = \left(-2 + \frac{x}{2}\right)e^{-\frac{x}{2}} - \frac{1}{2}\left(2 - 2x + \frac{x^2}{4}\right)e^{-\frac{x}{2}}$$

$$= \left(-3 + \frac{3}{2}x - \frac{x^2}{8}\right)e^{-\frac{x}{2}} = 0$$