

R1	$\Delta = \frac{[Px^2 \cdot (3L - x)]}{6EI}$	Need to get 6 equations for Δ where $x = L_{.1}$ to $L_{.6}$. This will give me $\Delta_{.p1}$ to $\Delta_{.p6}$
R2		
R3	$\delta = \frac{Px^2 \cdot (3a - x)}{6EI}$	Need 6 equations for $P = R_{.1}$, $a = L_{.1}$, and $x = L_{.1}$ to $L_{.6}$. This will give me $\delta_{.11}$ to $\delta_{.61}$
R4		
R5		Need 5 equations for $P = R_{.2}$, $a = L_{.2}$ and $x = L_{.2}$ to $L_{.6}$. This will give me $\delta_{.22}$ to $\delta_{.62}$
		Need 4 equations for $P = R_{.3}$, $a = L_{.3}$ and $x = L_{.3}$ to $L_{.6}$. This will give me $\delta_{.33}$ to $\delta_{.63}$
		Need 3 equations for $P = R_{.4}$, $a = L_{.4}$ and $x = L_{.4}$ to $L_{.6}$. This will give me $\delta_{.44}$ to $\delta_{.64}$
		Need 2 equations for $P = R_{.5}$, $a = L_{.5}$ and $x = L_{.5}$ to $L_{.6}$. This will give me $\delta_{.55}$ to $\delta_{.65}$
		Need 1 equations for $P = R_{.6}$, $a = L_{.6}$ and $x = L_{.6}$. This will give me $\delta_{.66}$.

$$\delta = \frac{Pa^2 \cdot (3x - a)}{6EI}$$

Need 1 equations for $P = R_{.2}$, $a = L_{.2}$ and $x = L_{.1}$. This will give me $\delta_{.12}$

Need 2 equations for $P = R_{.3}$, $a = L_{.3}$ and $x = L_{.1}$ to $L_{.2}$. This will give me $\delta_{.13}$ to $\delta_{.23}$

Need 3 equations for $P = R_{.4}$, $a = L_{.4}$ and $x = L_{.1}$ to $L_{.3}$. This will give me $\delta_{.14}$ to $\delta_{.34}$

Need 4 equations for $P = R_{.5}$, $a = L_{.5}$ and $x = L_{.1}$ to $L_{.4}$. This will give me $\delta_{.15}$ to $\delta_{.45}$

Need 5 equations for $P = R_{.6}$, $a = L_{.6}$ and $x = L_{.1}$ to $L_{.5}$. This will give me $\delta_{.16}$ to $\delta_{.56}$

$$\begin{aligned} \Delta_{.1p} + \delta_{.11} + \delta_{.12} + \delta_{.13} + \delta_{.14} + \delta_{.15} + \delta_{.16} &= 0 \\ \Delta_{.2p} + \delta_{.21} + \delta_{.22} + \delta_{.23} + \delta_{.24} + \delta_{.25} + \delta_{.26} &= 0 \\ \Delta_{.3p} + \delta_{.31} + \delta_{.32} + \delta_{.33} + \delta_{.34} + \delta_{.35} + \delta_{.36} &= 0 \\ \Delta_{.4p} + \delta_{.41} + \delta_{.42} + \delta_{.43} + \delta_{.44} + \delta_{.45} + \delta_{.46} &= 0 \\ \Delta_{.5p} + \delta_{.51} + \delta_{.52} + \delta_{.53} + \delta_{.54} + \delta_{.55} + \delta_{.56} &= 0 \\ \Delta_{.6p} + \delta_{.61} + \delta_{.62} + \delta_{.63} + \delta_{.64} + \delta_{.65} + \delta_{.66} &= 0 \end{aligned}$$

Solve for $R_{.1}$ to $R_{.6}$

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