

Dynamic of Structure: Mode and Time Period

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$$NumberOfStoreys = 2 \quad (1)$$

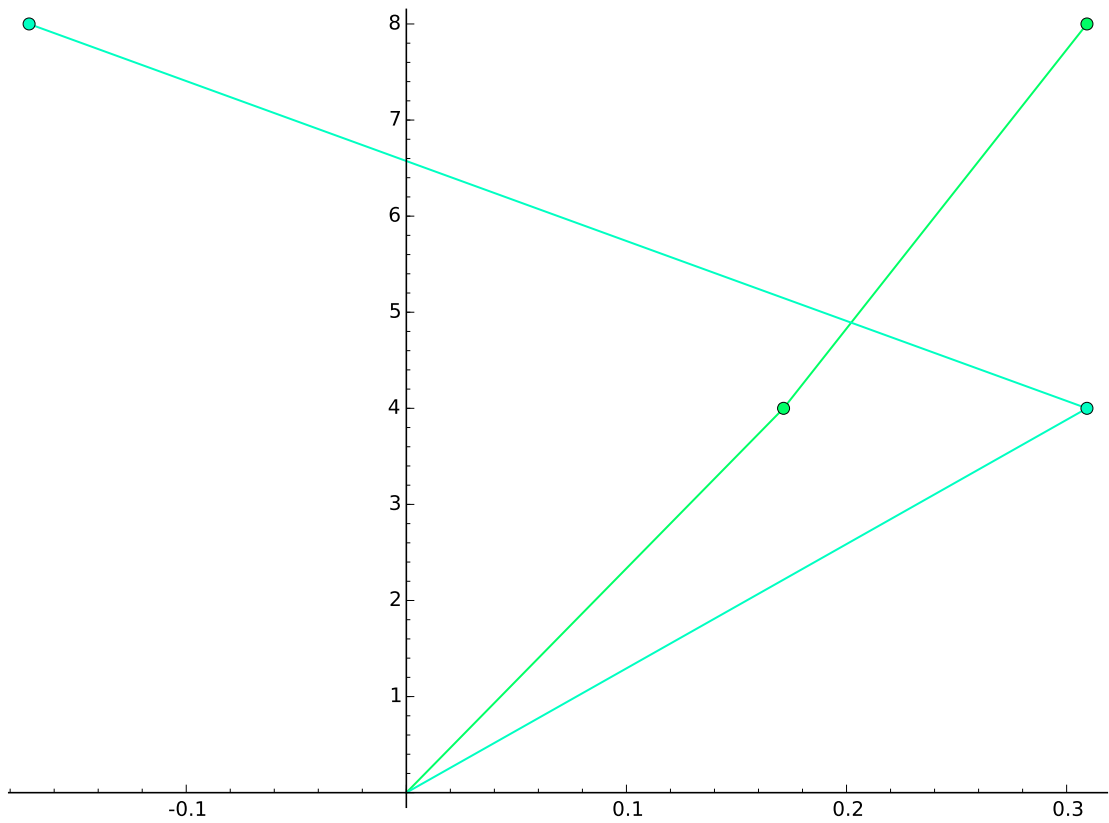
$$StiffnessMatrix = \begin{bmatrix} 1800 & -800 \\ -800 & 800 \end{bmatrix} \quad (2)$$

$$Mass = \begin{bmatrix} 8 & 0 \\ 0 & 8 \end{bmatrix} \quad (3)$$

$$OmegaSquare = \begin{bmatrix} 44.5752 & 280.425 \end{bmatrix} \quad (4)$$

$$TimePeriod = \begin{bmatrix} 0.9411 & 0.0000 \\ 0.0000 & 0.3752 \end{bmatrix} \quad (5)$$

$$Frequency = (6.676, 16.75) \quad (6)$$



$$LevelFloor = \begin{bmatrix} 4.000 & 8.000 \end{bmatrix} \quad (7)$$

$$ModalParticipationFactor = \begin{bmatrix} 3.845 & 1.103 \end{bmatrix} \quad (8)$$

$$ModalMass = \begin{bmatrix} 14.78 & 1.216 \end{bmatrix} \quad (9)$$

$$ModalContribution = \begin{bmatrix} 92.40 & 7.600 \end{bmatrix} \quad (10)$$

$$SaByG = \begin{bmatrix} 0.0000 & 1.063 \\ 0.0000 & 2.500 \end{bmatrix} \quad (11)$$

$$AH = \begin{bmatrix} 0.0000 & 0.02550 \\ 0.0000 & 0.06000 \end{bmatrix} \quad (12)$$

$$DesignLateralforce = \begin{bmatrix} 1.319 & 1.606 \\ 2.380 & -0.8900 \end{bmatrix} \quad (13)$$

$$PeakShearForce = \begin{bmatrix} 3.699 & 0.7158 \\ 2.380 & -0.8900 \end{bmatrix} \quad (14)$$

ABS-:

$$StoreyShearForce = (4.414, 3.270) \quad (15)$$

SRSS -:

$$StoreyShearForce = (3.767, 2.541) \quad (16)$$

Complete Quadratic combination -:

$$LateralForce = (1.054, 0.2341) \quad (17)$$

Maximum Absolute Response -:

$$Force = (0.8198, 0.2341) \quad (18)$$