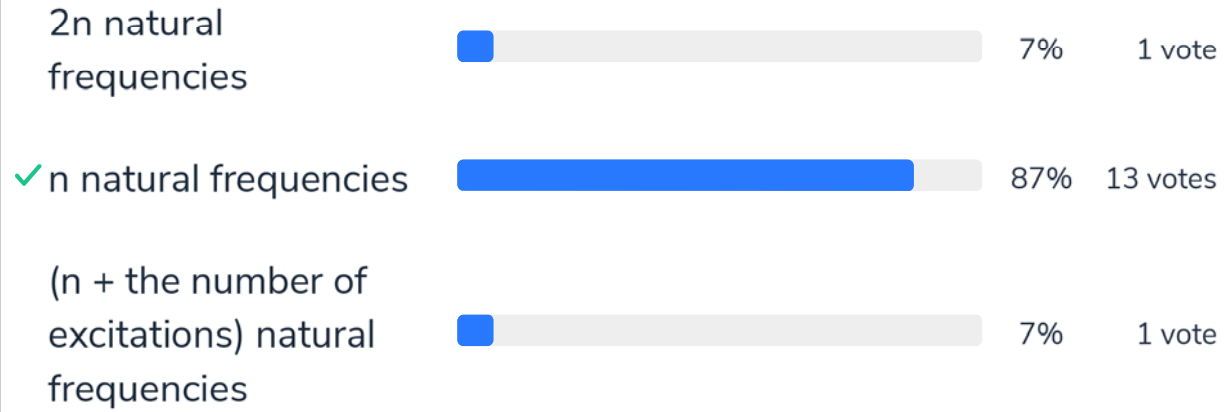


DOS2019_MDOF

Number of participants: 17


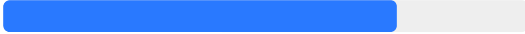

1

If a system has n degrees of freedom,
it has



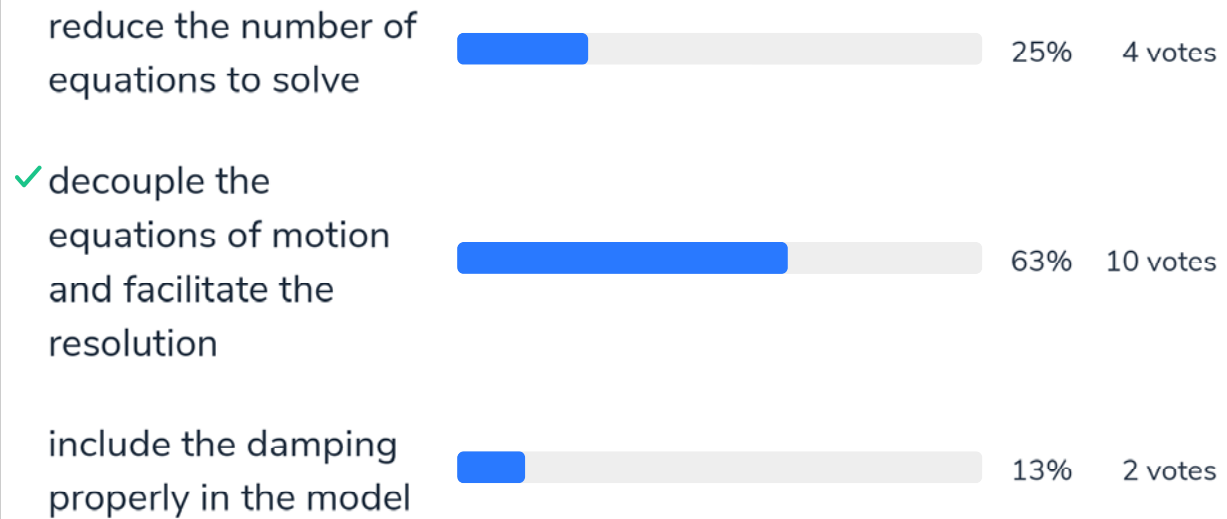
2

The mode shapes are orthogonal
with respect to the

✓ stiffness matrix		75%	12 votes
✓ mass matrix		75%	12 votes
damping matrix		0%	0 votes

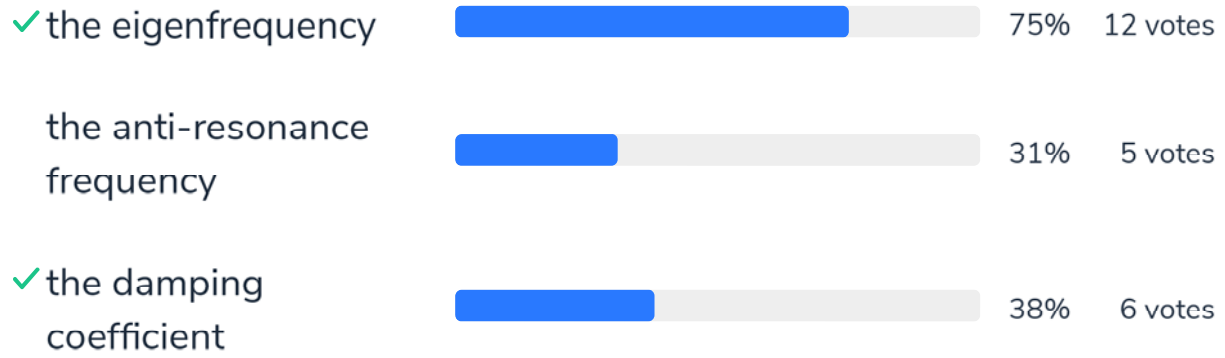
3

The interest of projecting the equations of motion in the modal domain is to:



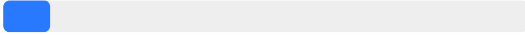


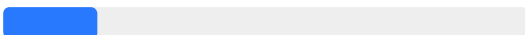
4

Which of these quantities is a global quantity for a given structure



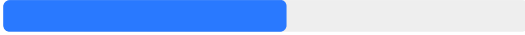



5

A mass-spring system consists of a rigid mass at the end of a cantilever beam. If the length of the bar is divided by two, the natural frequency is

divided by two		9%	1 vote
multiplied by $\sqrt{2}$		64%	7 votes
multiplied by 2		9%	1 vote
✓ multiplied by $2\sqrt{2}$		18%	2 votes

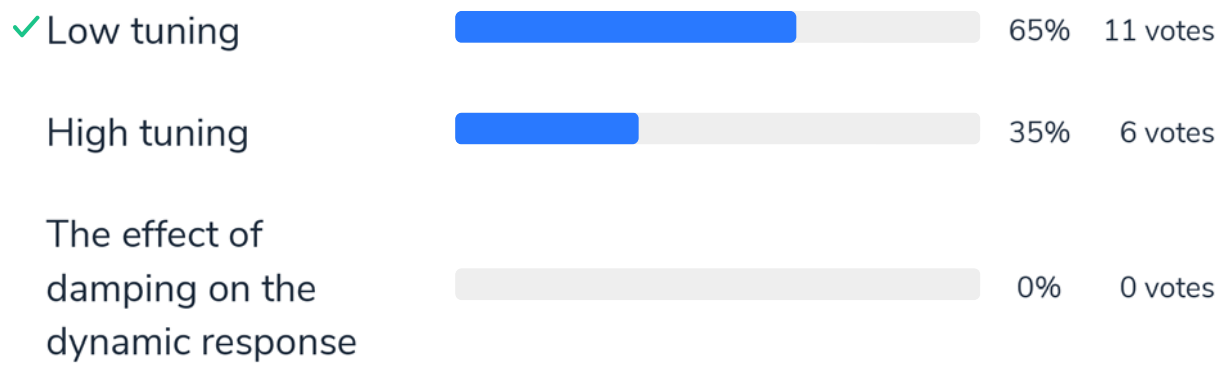
6

What kind of hypothesis can be made on the damping matrix to decouple the equations of motion in the modal domain ?

✓ Rayleig Damping		54%	7 votes
Lagrange Damping		0%	0 votes
✓ Modal damping		77%	10 votes
Viscous damping		8%	1 vote

7

The figure illustrates



8

How many mode shapes and eigenfrequencies does this building simplified model have ?

