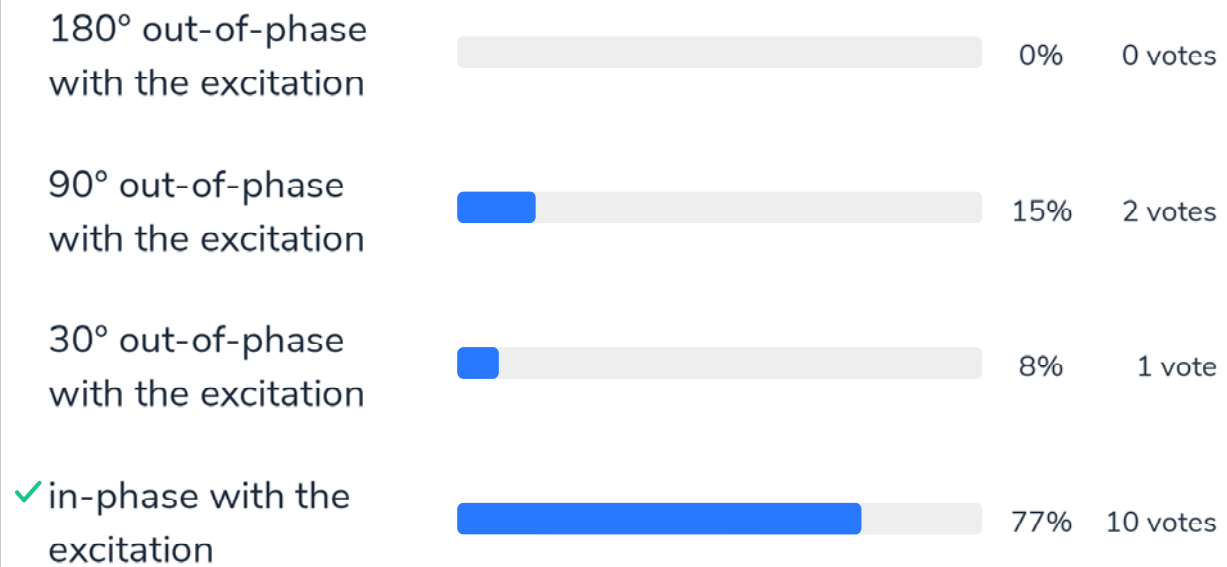


# DOS2019-1DOF

Number of participants: 23

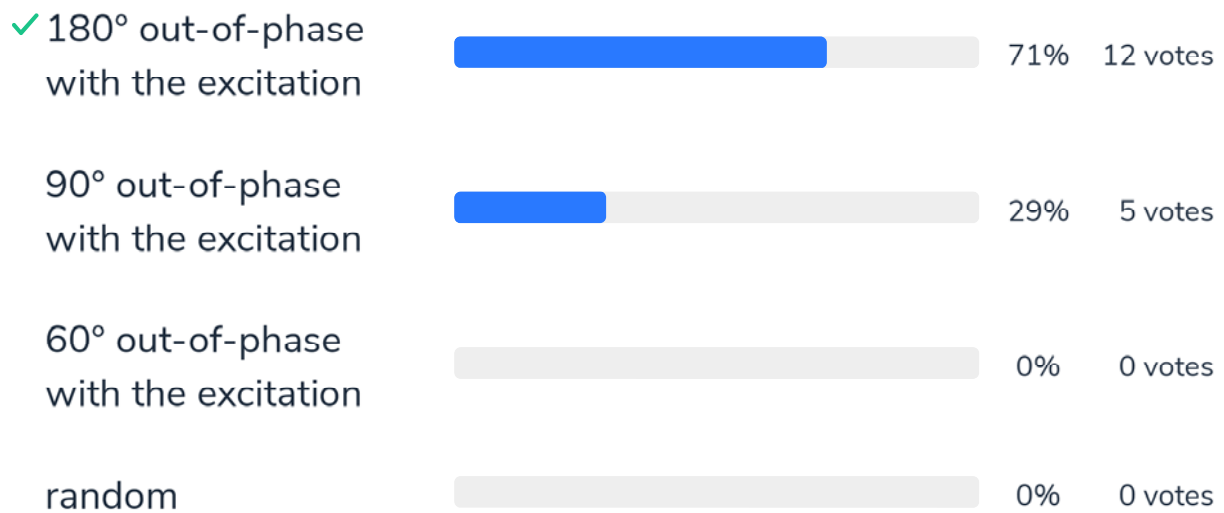
**1**

When excited at a frequency below the natural frequency of a mass-spring system, the motion of the mass is



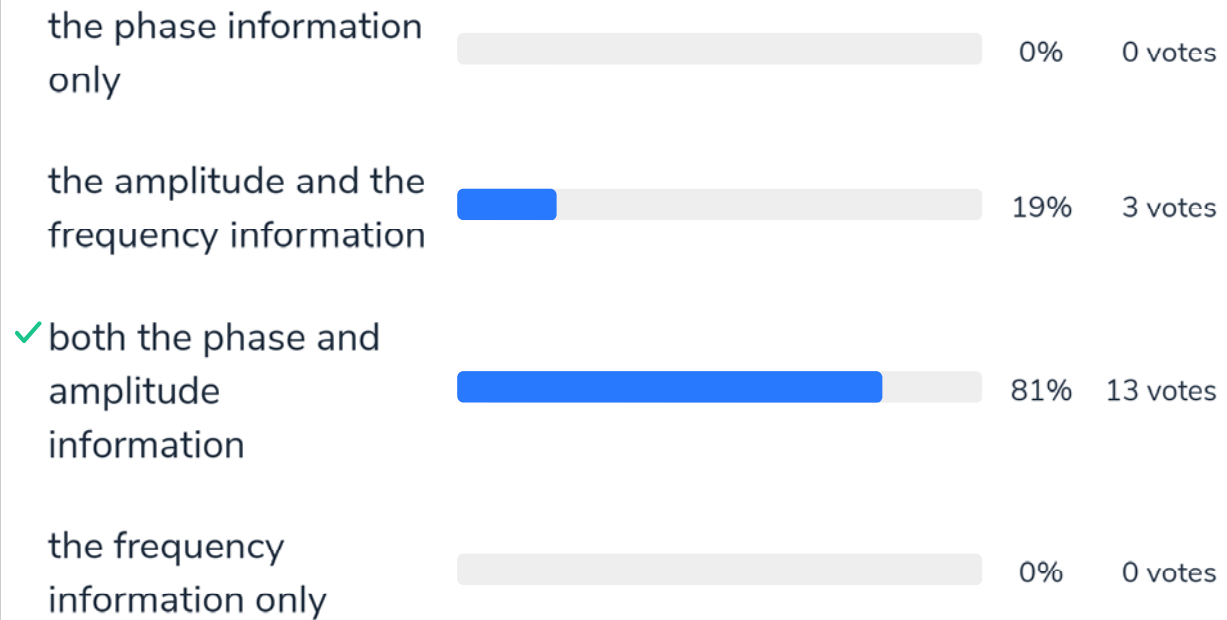
2

When excited at a frequency above the natural frequency of a mass-spring system, the motion of the mass is



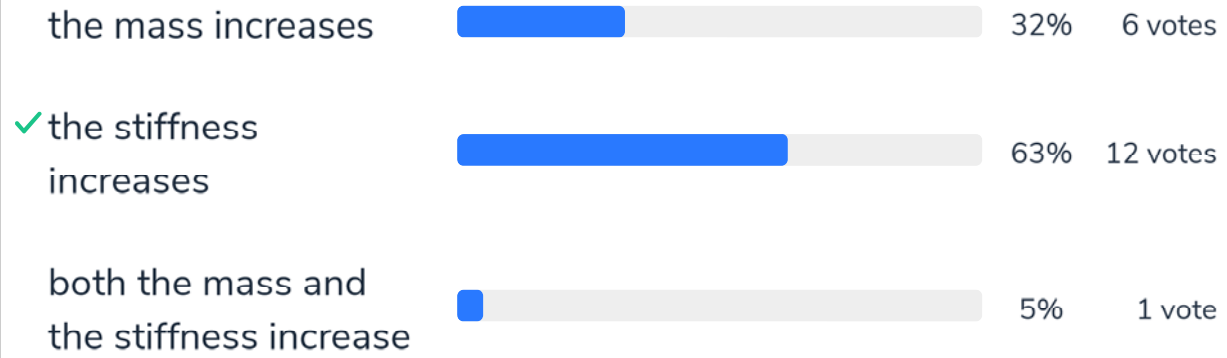
3

When describing a harmonic motion,  
the complex amplitude vector  
contains



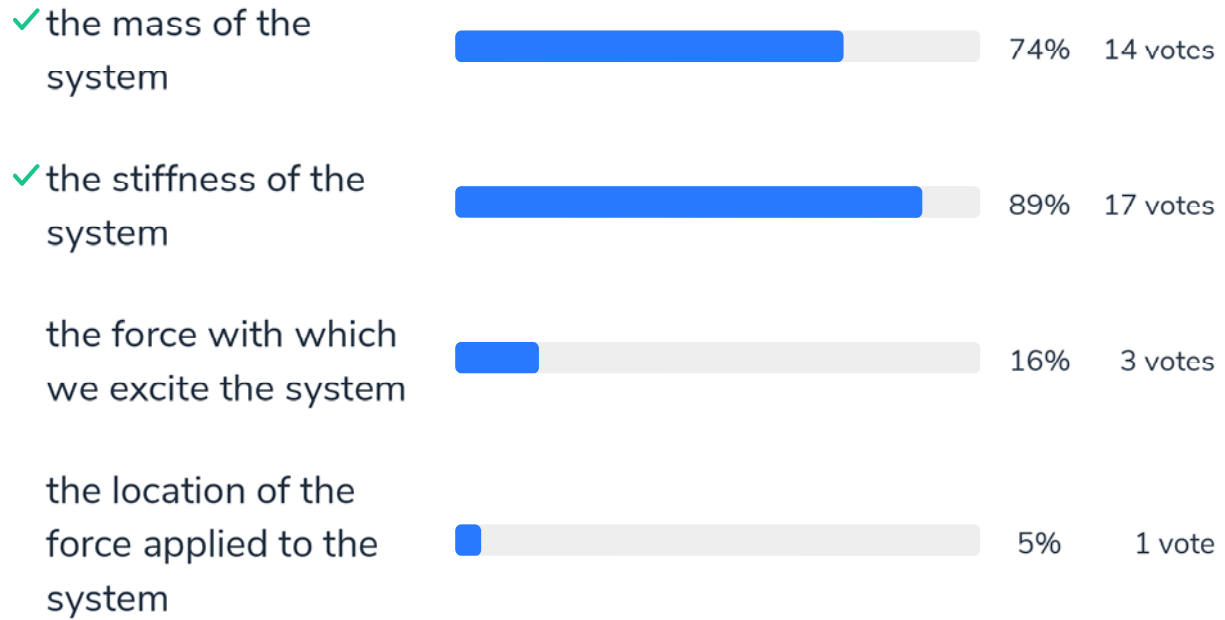
4

The natural frequency of a mass-spring system increases when



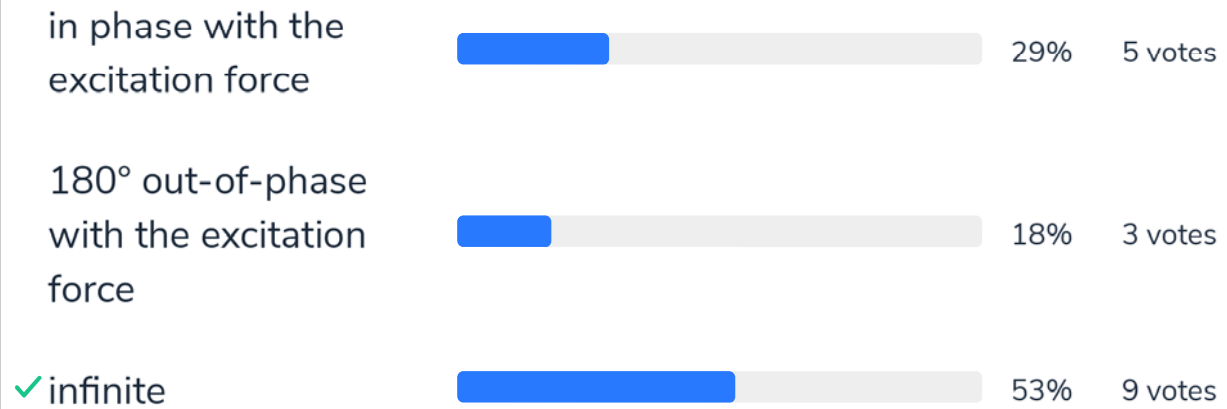
5

## The natural frequency of a mass-spring system depends on



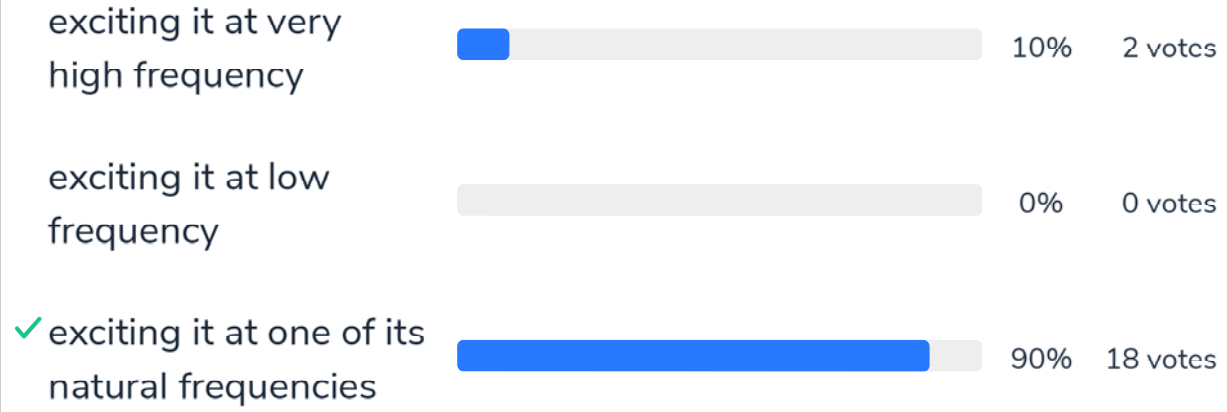
6

For a undamped 1DOF system, when excited at its natural frequency, the amplitude of the motion is



7

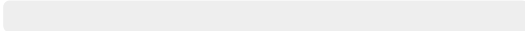

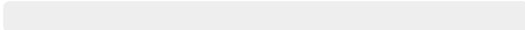
It is possible to break a wine glass  
with your voice by





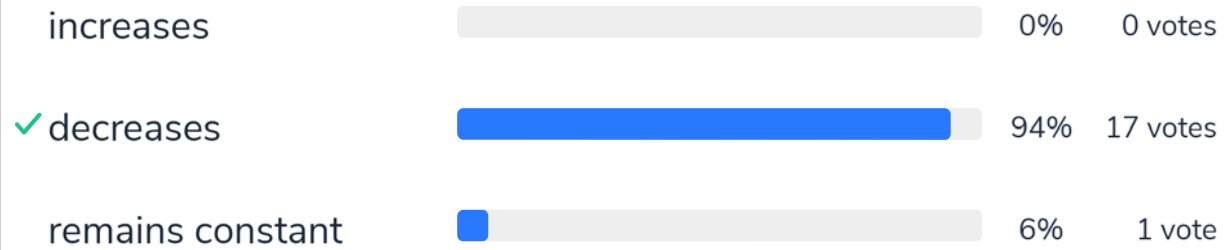
8

When the damping coefficient of a one dof system is 1% and considering a free vibration, the amplitude decreases of a factor 0.5 after

5 oscillations		0%	0 votes
✓ 10 oscillations		100%	1 vote
100 oscillations		0%	0 votes



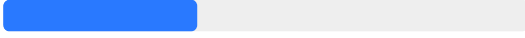
9

When damping increases in a one dof system, the amplitude of vibration when excited near its natural frequency



10

When damping increases in a one dof system, the amplitude of vibration when excited far from its natural frequency

decreases		32%	6 votes
increases		32%	6 votes
✓ remains constant		37%	7 votes

11

Where is the resonance phenomenon on this diagram ?

