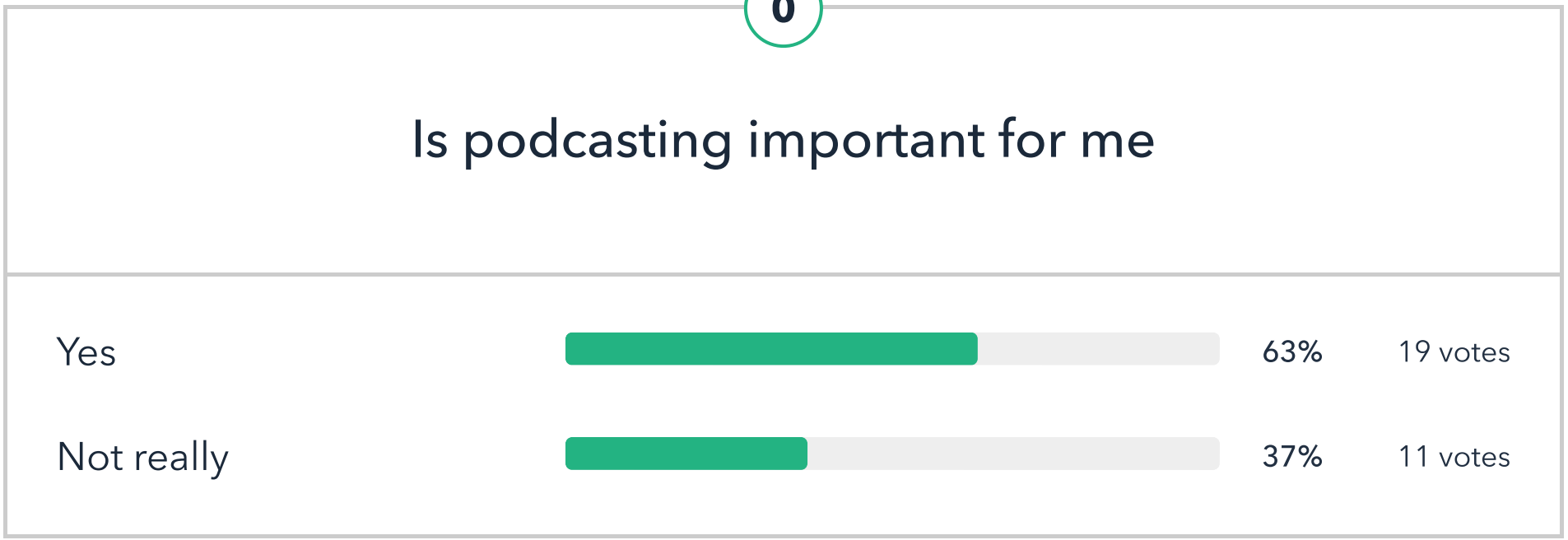
Vibrations and Acoustics - 1DOF

Number of participants: 33

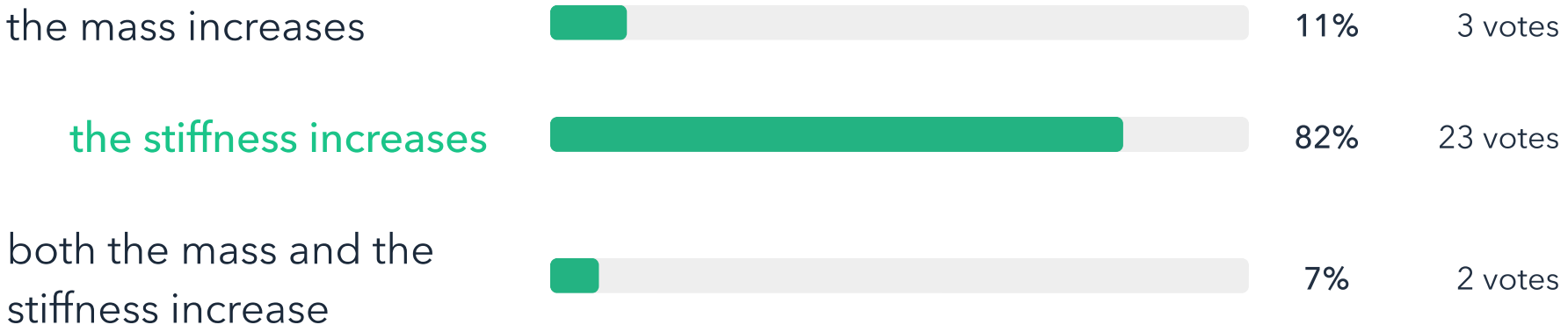
0

Is podcasting important for me



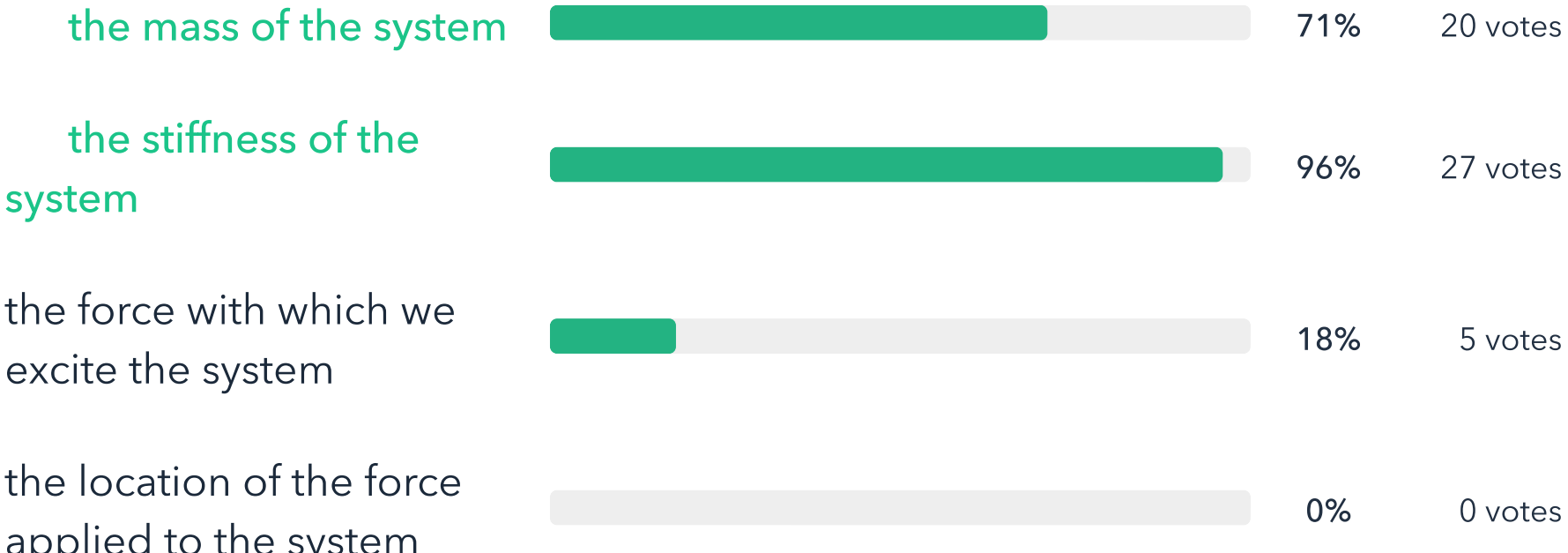
2

The natural frequency of a mass-spring system increases when



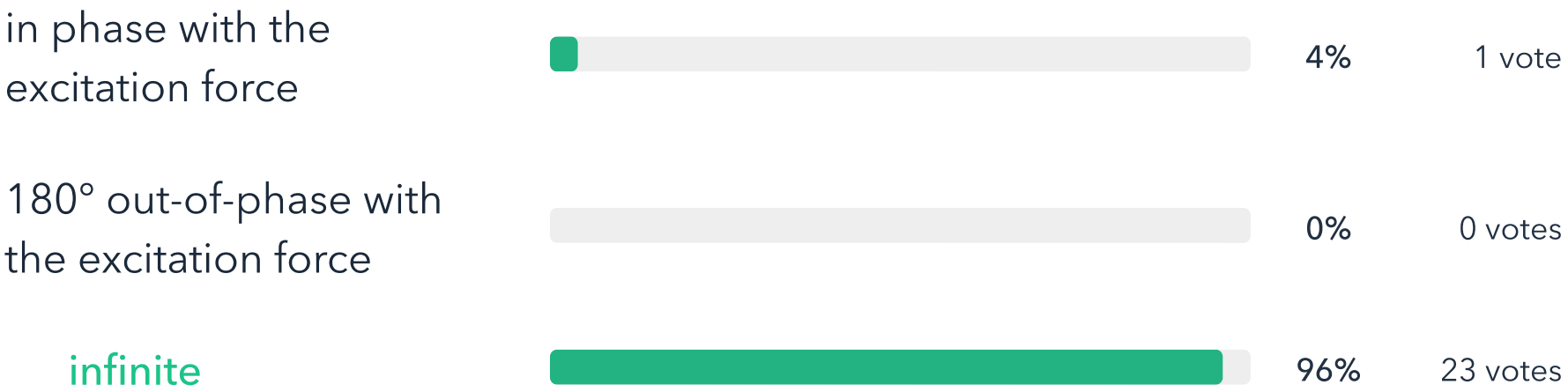
3

The natural frequency of a mass-spring system depends on



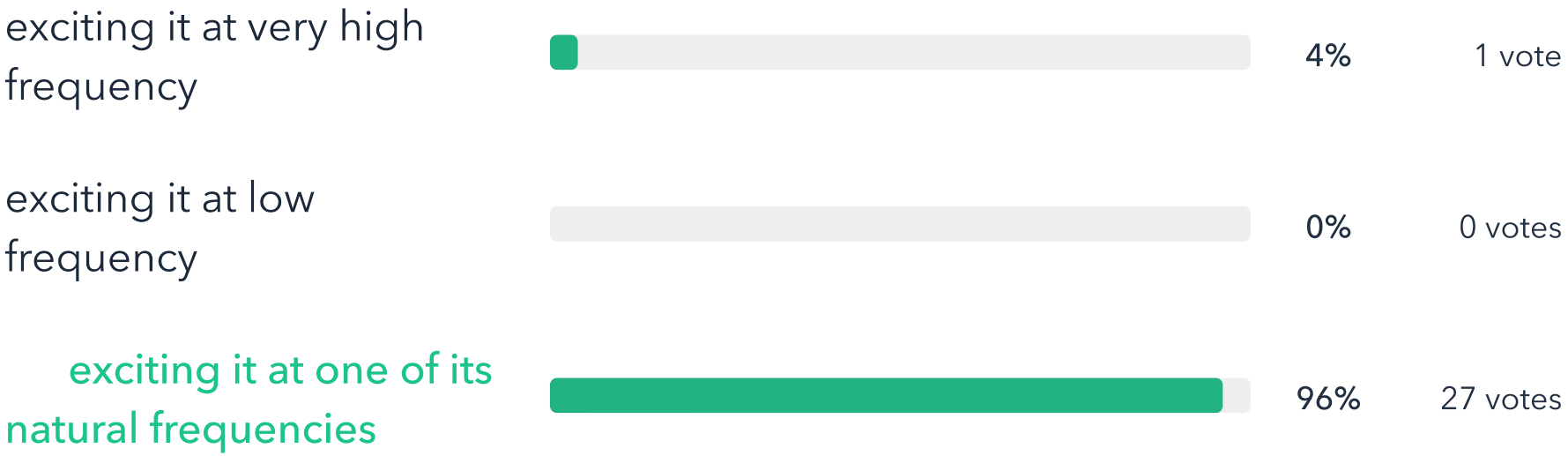
4

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



5

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



6

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	0%	0 votes
100 oscillations	0%	0 votes

7

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

increases	0%	0 votes
decreases	0%	0 votes
remains constant	0%	0 votes

8

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

decreases	0%	0 votes
increases	0%	0 votes
remains constant	0%	0 votes

9

The Fourier transform of the impulse response of a system is

a dirac function	0%	0 votes
a sync function	0%	0 votes
the transfer function of the system	0%	0 votes

10

The equivalent stiffness of a bar in traction is

Proportional to the Young's modulus	0%	0 votes
Proportional to the length of the bar	0%	0 votes
Proportional to the density of the bar	0%	0 votes

11

The computation of the equivalent mass of a system is based on

an equivalence of strain energy	0%	0 votes
an equivalence of kinetic energy	0%	0 votes
an equivalence of the dissipated energy	0%	0 votes

12

The damping ratio of a one dof system is proportional to

the dissipated energy	0%	0 votes
the strain energy	0%	0 votes
the ration of the dissipated energy in one cycle divided by the maximum strain energy	0%	0 votes

13

An equivalent viscous damping model can be defined by

equating the dissipated energy at the natural frequency of the system	0%	0 votes
equating the diffipated energy at specific frequencies	0%	0 votes
using complex integral formulations	0%	0 votes

14

Coulomb friction damping depends on

the frequency of excitation	0%	0 votes
the amplitude of motion of the 1DOF system	0%	0 votes
the stiffness of the spring	0%	0 votes

15

When reducing a system to a one dof system, the response computed with the reduced model

is exact	0%	0 votes
is only valid in a certain frequency band	0%	0 votes
is only valid at the first natural frequency of the system	0%	0 votes