

W9.01 KEY

1. Sound is a mechanical wave and needs a medium to be heard.
2. In principle, this is possible if the singer sings at the natural frequency of the glass for long enough. In practice, it is only possible to put enough energy into the glass with an amplified voice.
3. The ear is most sensitive to frequencies around 3400 Hz, the first harmonic of a closed-open tube of length 2.5 cm.
4. 100
5. .
 - a. 10
 - b. $100 (10^2)$
 - c. $100000 (10^5)$
 - d. $10000000 (10^7)$
 - e. $100000000000 (10^{11})$
6. 100