

Unit 5: Day 5 HW Log Applications, Decibel Scale

1. 50 dB

2a. Answer: 1,000,000,000

Here's how:

$$90 = 10 \cdot \log R$$
$$9 = \log R$$
$$R = 10^9$$

3. Answer: 130 dB

Here's how:

$$N = 10 \log 10^{13}$$
$$N = 10 \cdot 13$$
$$N = 130$$

5. The relative intensity of the second sound is 6.31 times the relative intensity of the first sound.

Hint: Find the relative intensity (R) of each sound (see #2a) and then divide them.