Sound Attenuation Calculator - Inverse Square Law

The formula to calculate sound attenuation over distance for a **point source** is:

$$Lp(R2) = Lp(R1) - 20 \cdot Log_{10}(R2/R1)$$

Where:
Lp(R1) = Known sound pressure level at the first location (typically measured data or equipment vendor data)
Lp(R2) = Unknown sound pressure level at the second location Location
R1 = Distance from the noise source to location of known sound pressure level
R2 = Distance from noise source to the second location

Known sound pressure level (dB(A))

91
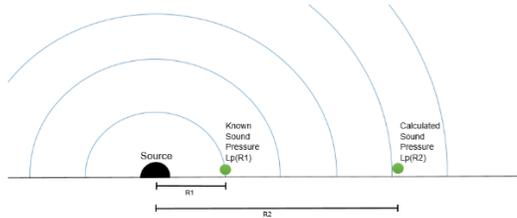
Select Metric or Imperial Units:
○ Metric
● Imperial

Distance from source for known sound pressure level (R1) (ft)

1

Tested sound pressure levels are commonly given at 1m or 3ft (R1)

Distance from source to position R2 (ft)

300

Attenuated sound pressure level (dB(A))

41.5