Sound Attenuation Calculator - Inverse Square Law

The formula to calculate sound attenuation over distance for a **point source** is:
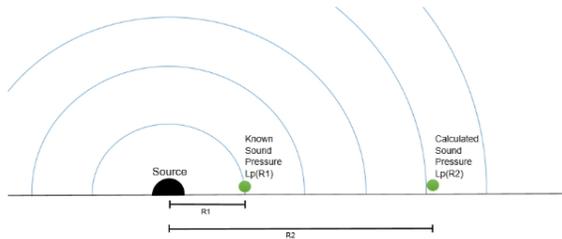
Lp(R2) = Lp(R1) - 20·Log$_{10}$(R2/R1)

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))

95

Select Metric or Imperial Units:

● Metric
○ Imperial

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

50

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

Distance from source to position R2 (m)

140

Attenuated sound pressure level (dB(A))

86.1