What is root mean square error? (RMSE)

According to ESRI:

RMS error [STATISTICS] Acronym for root mean square error. A measure of the difference between locations that are known and locations that have been interpolated or digitized. RMS error is derived by squaring the differences between known and unknown points, adding those together, dividing that by the number of test points, and then taking the square root of that result.
RMS error $= \sqrt{\frac{e_1^2 + e_2^2 + e_3^2 + \ldots + e_n^2}{n}}$
GCPs
Let's do some math!
Why does RMSE matter?
It is important to create precise and accurate data!

Sources: