Stiffness comparison between solid and tubular bars

Method for calculating anti-roll bar stiffness

\[ T = \text{track (ins)} \]
\[ K = \text{fractional lever arm ratio} \]
\[ d = \text{diameter of the bar (ins)} \]
\[ R = \text{effective length of bar (ins)} \]
\[ L = \text{half length of bar} \]
\[ S = \text{length of lever arm} \]
\[ Q = \text{stiffness in lb/ins per degree of vehicle roll} \]