**Report Wheelbase**  
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**Introduction:**In this small report we provide an analysis of the wheelbase and the effects/influences of the wheelbase on the dynamics of the motorcycle. The analysis is mainly based on information from the book Motorcycle Dynamics by Cossalter.

**Definitions:**  
p = wheelbase [m]

**Influences:**An increase in the wheelbase will result in the following positive (+) and negative (-) effects:

(-) Increase in flexional and torsional deformability of the frame. Here note that more deformable   
 frames result in less maneuverability (why?)

(-) Increase in minimum curvature radius -> what is the minimum curvature radius that we need?  
   
(-) Increase in the necessary steering torque -> more difficult to handle (How much does this increase and is that so much that it matters for a racing motorcycle?)  
  
(+) Decrease in load transfer, which results in more stability during acceleration/braking and decreases the pitch   
  
(+) Reduction of pitching due to road unevenness (Is this even important at all, since we are at a quite even road track?)  
  
(+) Increase in directional stability ?(What does the directional stability entails? Can it become too stable? When do we reach that point?)

**Values:**

**Conclusion and discussion:**



**References:**