**Chapter 12 - Waves**

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| **Basic Waves** | Symbols and units:  *F* - force (N)  *m* - mass (kg) (g/1000 = kg)  *a* - acceleration (m/s/s)  *μ* - coefficient of friction  *v* - tangential velocity (m/s)  *T* - period (s) |
| **Standing Waves**  Top: 1g – ride Bottom: 1g + ride  (m/s/s) ÷ 9.8 = (“g”s)  (“g”s ) x 9.8 = (m/s/s) | Inverted “g”s are negative  1 “g” = 9.8 m/s/s  a > 9.8 for water to stay in the bucket etc. |
| **Doppler**    *G* - Universal Gravitation Constant  (6.67x10-11 Nm2/kg2) | Symbols and units:  *F* - force (N)  *m1* - the first mass (kg)  *m2* - the second mass (kg)  *r* - distance separating the centers (m)  *G* - Universal Gravitation Constant  (6.67x10-11 Nm2/kg2) |