

Similitude of Scale

Surface Area varies as the **Square** of the Dimensions. (l x w)

Volume varies as the **Cube** of the Dimensions. (l x w x h)

Stability varies as the **Fourth Power** of the Dimensions. (l x w x h x Righting Arm)

Speed varies as the **Square Root** of the Waterline Length.

Wetted Surface varies as the **Square** of the Dimensions.

Resistance varies as the **Cube** of the Dimensions.

Sail Area varies as the **Square** of the Dimensions.

Wind Pressure varies as the **Square** of the Wind Speed.

Heeling Moment varies as the **Cube** of the Dimensions.

Displacement varies as the **Cube** of the Dimensions.

GM varies as the **Cube** of changes in Beam Only.

GM varies **Inversely** with Changes in Displacement Only.

Stability varies **Directly** with changes in Length Only (if other dimensions remain same).

Stability varies as the **Square** of changes in Beam Only.

Stability varies as the **Fourth Power** of the Dimensions.