# WEIGHT OF THE WORLD

The REST OF THE STORY! The North/South Net Force & East/West Net Force

Purpose: The calculate the Net Forces in the +x & -x directionzero!
and the +y & -y direction and show that they are both
only now use the Sin B times the Sin & Cos of the angle (α)
made with the +x axis counterclockwise.
To find α just drop a plumb bob from each string to the floor counterclockwise
and figure the angle with the +x axis (east)
Angles range from 0 degrees to 360 degrees.

| Data: | Angle B | Angle B | from other side Tension in Cable | from other side F x (N) | Angle α | FxSin α | FxCos α |
|---|---|---|---|---|---|---|---|
| Cable # | Degrees | Radians | | | | | |
| 1 | 73 | 1.27409 | 1.783467399 | 6.1 | 237 | -5.11589 | -3.3223 |
| 2 | 64 | 1.117011 | 3.506969174 | 8 | 214 | -4.473543 | -6.6323 |
| 3 | 62 | 1.082104 | 8.403540974 | 17.9 | 178.5 | 0.4685674 | -17.8939 |
| 4 | 69 | 1.204277 | 2.436902057 | 6.8 | 144 | 3.9969397 | -5.50132 |
| 5 | 52 | 0.907571 | 8.98865754 | 14.6 | 100 | 14.378193 | -2.53526 |
| 6 | 71 | 1.239184 | 4.069601931 | 12.5 | 75 | 12.074073 | 3.235238 |
| 7 | 68 | 1.186824 | 3.783526594 | 10.1 | 36.8 | 6.0501383 | 8.087387 |
| 8 | 39 | 0.680678 | 11.26861644 | 14.5 | 2.5 | 0.6324811 | 14.4862 |
| 9 | 62 | 1.082104 | 5.492817285 | 11.7 | 321 | -7.363049 | 9.092608 |
| 10 | 70 | 1.22173 | 3.112383304 | 9.1 | 308 | -7.170898 | 5.602519 |
| 11 | 76 | 1.32645 | 1.403146994 | 5.8 | 286 | -5.575318 | 1.598697 |
| 12 | 35 | 0.610865 | 8.027690034 | 9.8 | 232 | -7.722505 | -6.03348 |
| | | | ∑ 's of FxSin α and FxCos α | | | 0.1791892 | 0.184122 |

Conclusions:

Summary: