

Gravitational Forces and Weight Handout Sheet

Variation in Gravity with Latitude (at sea level)		
Latitude (°)	\vec{g} (N/kg[downward])	Distance from Earth's Center (km)
0 (equator)	9.7805	6378
15	9.7839	6377
30	9.7934	6373
45	9.8063	6367
60	9.8192	6362
75	9.8287	6358
90 (North Pole)	9.8322	6357

Variation in Gravity with Altitude (at similar latitudes)				
Location	Latitude (°)	\vec{g} at sea level (N/kg[down])	Altitude (m)	\vec{g} (N/kg[down])
Toronto	44	9.8054	162	9.8049
Mount Everest	28	9.7919	8848	9.7647
Dead Sea	32	9.7950	-397	9.7962