NAME: **HONORS CHEMISTRY**

SECTION: Dimensional Analysis

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| **Table of Weights and Measures** | | |
| Length | Area | Volume |
| 1 nautical mile = 6076.11549 feet  1 inch = 2.54 cm  1 league = 5280 yards  1 cable = 120 fathoms  1 fathom = 6 feet  1 degree = 69.047 miles  1 mile = 5280 feet  1 hand = 4 inches | 1 township = 36 square miles  Remember to derive area conversion factors by working with length and squaring all dimensions  Ex.  1 square foot = 12 in x 12 in  = 144 in2 | 4 gill = 1 pint  2 pints = 1 quart  1 liter = 1.0567 quarts  1 bushel = 4 pecks = 32 quarts  1 gallon = 4 quarts |

Show all your work. Report your answer with the correct number of significant figures and appropriate units.

Changes in latitude, changes in attitude…

1. Your cruise ship is leaving for a 610. league adventure. How many nautical miles is this?
2. Later the ship is discovered at 34 fathoms below the water surface. Convert this to meters.
3. Fortunately, you survived! You are stranded on a deserted island that is located 12.5 degrees north of the equator. How many kilometers is this?
4. If you are rationed to 32 gills of fresh water a day, how many liters is this?
5. The island has an area of 3.50 townships. How many square yards is this? Use scientific notation to report your answer.
6. The island is rich with hot chile peppers. You can collect 1.6 pecks a day. How many gallons of peppers could you collect in one week?