

### 3-D and Volume Quest Helps – May 14-15, appr. 42 pts

Vocabulary: recognize, name in all possible ways: polyhedron (with correct prefix), prism, pyramid, cone, cylinder, sphere, hemisphere; and their parts: faces, bases, vertices, vertex of a pyramid, great circle, oblique, right

Know all formulas for volume: prism/cylinder, pyramid/cone, sphere & hemisphere volume and surface area. Know area formulas for area of base: rectangle, parallelogram, triangle, regular polygon, trapezoid, circle.

Find volume of any of these solids using the formulas and given information. Solve for a dimension algebraically.

Find irregular volume given information about amount of liquid displaced. Use a density table to figure out which element using  $\text{Density} = \text{mass}/\text{volume}$ .

Identify solid of revolution and find its volume as it rotates around an axis.

Find information in real world context given a conversion (like problems about gallons, weight, etc.)

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