Geometry Unit

Understanding and Using Formulas

Perimeter, Circumference, Area, Volume and Surface Area

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

You will be assigned to a group and given a variety of activities to work on during this unit. Five of the activities are required for everyone to do. Of the remaining four, you must choose two of the activities.

Grading will be as follows:

Both vocabulary definitions sheets 10 points

Vocabulary quiz 10 points

Sketch book 20 points

Quiz on Perimeter, Circumference, and Area 10 points

Quiz on Volume and Surface Area 10 points

Presentation explaining difference between

perimeter/circumference, area and volume 10 points

Nets for rectangular prism and cylinder 10 points

Free choice activity 10 points

Free choice activity 10 points

Total for Geometry Unit 100 points

In addition, you will be receiving separate quiz grades for the three quizzes.

Geometry Unit Activities

The activities labeled with \* are required by everyone. You must complete the definitions worksheets before taking the vocabulary quiz and the sketch book before taking either of the quizzes described in #3. You must choose two of the other four activities in order to complete the unit.

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| **1\***  Look up all the required definitions and take the vocabulary quiz.  (10 points for definition sheet and up to 10 points for vocabulary quiz, based on your score on the quiz.)  **(20 point total)** | **6**  Create a presentation that describes the contributions to the study of geometry by either Euclid or Pythagorus.  **(10 points)** | **2\***  Make a sketch book of all the 2D and 3D shapes we will study. Along with the sketch, include the area (2D shapes) or volume (3D shapes) formula for each shape, as well as an example of how to use the formula. Make sure to include how to find the area of irregular figures and surface area of a rectangular prism.  **(20 points)** |
| **7**  Create a presentation that describes how two different careers use geometry.  **(10 points)** | **3\***  Take the two quizzes on perimeter/circumference/area and volume/surface area. These will count as separate quiz grades and the portion of the geometry unit grade will be based on the points earned on the quiz. You will be allowed to retake these quizzes to improve your score.  **(up to 20 points)** | **8**  Pick one of the formulas and create a lesson to teach someone how to use it.  **(10 points)** |
| **4\***  Create a presentation that explains the difference between perimeter/circumference, area and volume.  **(10 points)** | **9**  Choose a carpet sample and explain how to determine how much carpet to order and how much it will cost to carpet a room that measures 10 feet by 12 feet.  **(10 points)** | **5\***  Create nets for a rectangular prism and a cylinder. Use the nets to find the surface area of the shapes.  **(10 points)** |