**NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Updated 2016

**This part is due on: WEDNESDAY, JUNE 1st**

**Assignment 3: Creature Feature**

**Part I: Perimeters & Areas**

**Tier A**

**Part 1**: (Remember you may use a calculator, but must show your proportions and equations!)

This week you will find the perimeters and areas of TWO of the scaled drawings of your 4 polygons. You will also calculate the surface area and volume of one of your rectangular prisms using the actual dimensions.

1. Find the perimeter and area of the 2 polygons as they are **drawn on your graph paper** (not of the real creature) so that I will be able to check them. Measure in inches and round to the nearest quarter inch.
2. Write the perimeter in each polygon (on the graph paper) labeled

 P = \_\_\_\_\_.

1. Write the area in each polygon (on the graph paper) labeled

A= \_\_\_\_\_\_.

1. Measure the length, width and height of the rectangular prism, on your creature, and label these on the attached calculation sheet.
2. Now calculate the surface area and volume of your rectangular prism and add these answers to the sheet as well. You may use your reference sheet for formulas.
3. Write the surface area in the polygon (on the graph paper) labeled

 SA= \_\_\_\_\_.

1. Write the volume in the polygon (on the graph paper) labeled

 V = \_\_\_\_\_.

**Part II: Triangles**

1. Add 1 obtuse triangle, 1 acute triangle and 1 right triangle to the torso of your creature. These can be cut out of paper and placed on the torso.
2. Use your scale factor and proportions to determine the size of the triangles on your drawing. Do this on your scale calculation sheet. Draw them to scale on your graph paper. They do not need to be 3-D.

4) Find the perimeter of one the 3 triangles on your graph paper (scale

 drawing). Show the calculations for the perimeters on the calculation

 sheet. Round to the nearest ¼ inch.

5) Find the area of one of the 3 triangles on your graph paper (scale drawing).

 Show the calculations for the area on the calculation sheet. Round to the hundredths.

6) Measure the 3 angles of one of your triangles on your graph paper with a protractor. Clearly write each measurement at its angle on the graph

 paper.

7) Upload a new picture of your creature, which shows the triangles on your creature to your class’ picture diary. **Insert arrows pointing to your triangles!!**

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**RUBRIC: Assignment 3: 18 points**

**Check off each step as you complete it.**

\_\_\_\_\_\_\_\_\_\_\_\_ Surface area of rectangular prism. Put on drawing as SA = \_\_\_\_\_\_\_. (3 pts)

\_\_\_\_\_\_\_\_\_\_\_\_ Volume of rectangular prism. Put on drawing as V = \_\_\_\_\_\_. (3 pts)

\_\_\_\_\_\_\_\_\_\_\_\_\_ Perimeters of 2 polygons on your graph paper. Use your drawing to determine the perimeters. You must show the work on your calculation sheet. (4 pts)

\_\_\_\_\_\_\_\_\_\_\_\_ Areas of 2 polygons on your graph paper. Use your drawing to determine the areas. You must show the work on your calculation sheet. (4 pts)

\_\_\_\_\_\_\_\_\_\_\_\_ Neatness (2 pts)

\_\_\_\_\_\_\_\_\_\_\_\_\_ Creativity (2 pts)

**All perimeter and areas are of the scaled drawing, not of the actual creature!!!**

\_\_\_\_\_\_\_\_\_\_\_\_Addition of 3 different types of triangles (do not need to be 3 – D on your creature). (3 pts)

\_\_\_\_\_\_\_\_\_\_\_ Calculations for scaling triangles included and accurate. (3 pts)

\_\_\_\_\_\_\_\_\_\_\_ Triangles drawn on graph paper in the correct size. (3 pts)

\_\_\_\_\_\_\_\_\_\_ Perimeters of the 3 triangles on your graph paper. Use your drawing to determine the perimeters. You must show your work on your calculation sheet. (3 pts)

\_\_\_\_\_\_\_\_\_\_\_\_ Areas of the 3 triangles on your graph paper. Use your drawing to determine the areas. (3 pts)

 \_\_\_\_\_\_\_\_\_\_\_ Measurement of 3 angles of one of the triangles on your graph paper. The measurements need to be written clearly on the graph paper. (3 pts)

 \_\_\_\_\_\_\_\_\_\_\_ Photo uploaded to your photo library. Add a new slide, have arrows pointing to your new triangles. Tell your highlights and hardships. (4 pts)

 \_\_\_\_\_\_\_\_\_\_\_ Neatness (2 pts)

 \_\_\_\_\_\_\_\_\_\_\_ Creativitiy, effort ( 2pts)

CALCULATIONS:

ASSIGNMENT # 3 Part 1

|  |  |
| --- | --- |
| Perimeter – Polygon 1Shape \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Write on your drawing P = \_\_\_\_\_ | Area – Polygon 1Shape \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Write on your drawing A = \_\_\_\_\_ |
| Perimeter – Polygon 2Shape \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Write on your drawing P = \_\_\_\_\_ | Area – Polygon 2Shape \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Write on your drawing A = \_\_\_\_\_ |

**Volume and Surface Area of Rectangular Prism**

**All volumes and surface areas are of the actual creature, not the scaled drawing!!!**

Length:\_\_\_\_\_\_\_\_\_\_\_\_ Width:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Height:\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| Surface Area | Volume |
| Write on your drawing SA = \_\_\_\_\_ | Write on your drawing V = \_\_\_\_\_ |

CALCULATIONS:

ASSIGNMENT # 3 Part 2

|  |
| --- |
| **Triangle 1****Type of triangle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****Scale calculations:****Perimeter:****Area:** |

|  |
| --- |
| **Measure each angle of one of your triangles and place the measurement directly on your drawing.** |