

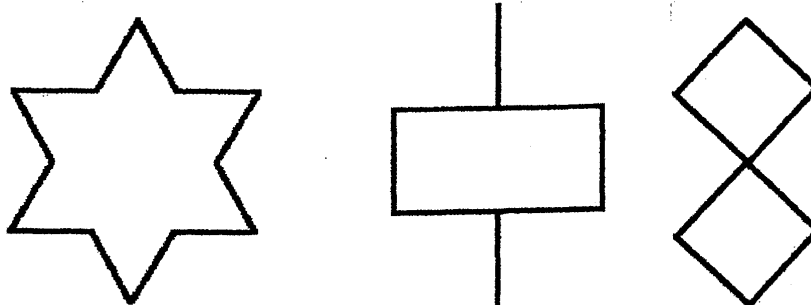
PROJECT UNIT TWO NAME: _____

TOTAL POINT VALUE: 100 POINTS

MANDATORY DUE DATE: MONDAY, NOV. 13

Mobiles are very interesting three-dimensional objects. As they turn or as they are viewed from different angles, they take on different shapes from a two-dimensional perspective.

One such mobile looks like these two-dimensional pictures when viewed from different angles:



Your grade will be based upon the following project guidelines:

- You will need to figure out how to build a 3-dimensional mobile that, when viewed from different perspectives, looks like the two-dimensional pictures above.
- This mobile must be made of congruent edges, using only 90 degree angles to join the pieces.

Your grade will be based upon the following guidelines:

20 points (1) In paragraph form, explain how to build such a mobile.

10 points (2) In paragraph form, explain how you figured out how to build this mobile.

10 points (3) Draw some other interesting two-dimensional views of this mobile.

60 points (4) Construct this mobile. Make it out of materials of your choice. However, be sure that it is a convenient size and made out of materials suitable for displaying in our classroom.

❖ BE SURE TO MAKE THIS PROJECT DESCRIPTION THE FIRST PAGE OF YOUR PROJECT WRITE-UP.

PROJECT UNIT TWO NAME: _____

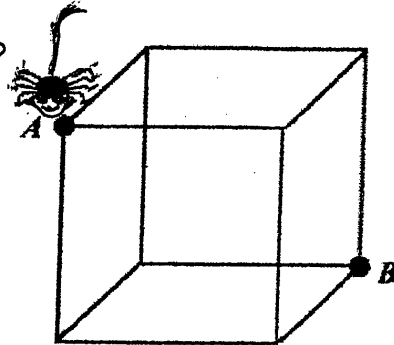
TOTAL POINT VALUE: 80 POINTS

MANDATORY DUE DATE: MONDAY, NOV. 13

A spider wants to walk from point A to point B on the outside of the cube shown below. This spider wants to travel the shortest path. One edge of the cube measures 5 inches.

What is the shortest path the spider can take?

What distance will it travel?



Your grade will be based upon the following guidelines:

20 points (1) Construct a model of the above situation. This will be a cube with points A and B labeled, and, of course, the spider situated on point A.

20 points (2) Describe in paragraph form how you can manipulate this cube to arrive at the answers to the above two questions.

20 points (3) Draw a two-dimensional model of how you manipulated your cube to arrive at your answers.

20 points (4) Show your calculations and state the mathematical theorem(s), rule(s), and/or method(s) you used to arrive at your answers.

- Be sure to make this project description the first page of your project write-up.
- If you desire more points than this project offers, please refer to the other projects available for Unit Two.

Project: Unit 2
The Gazebo Project

Name _____

TOTAL POINT VALUE: 110 POINTS
DUE DATE: Monday, November 13

Overview:

You are to make a scale drawing of a gazebo, build a scale model out of a sturdy material (such as poster board or foam board) and write a brief paper on one of two given topics. You may make the scale drawings using nets or the drawing may have a 3-D perspective. You need to also state the actual dimensions of your gazebo.

Make plans for your gazebo. Its base should be a regular polygon (a polygon is regular if its sides are congruent and its angles are congruent) with more than 4 sides. Its walls should consist of perpendicular rectangles and the roof should consist of triangles joined together. You must include an open doorway for entry and at least 2 windows.

You must make a scale drawing and state the actual life-size dimensions of your gazebo. Then you will build a scale model of the gazebo.

Examples for scales: If the actual length of a side of the base polygon is 8' then the scale drawing can have 4 blocks representing 8' and the scale model can have 4" representing the 8' of the actual gazebo. You may choose your own scale. Please list it on the scale drawing and include in your write-up.

For the paper, you are to find at least 3 pictures of gazebos (from magazines, etc.) and then you have two options:

Option 1: You may choose to explain the history of the gazebo. (2-3 paragraphs in length)

Option 2: You can choose to explain how you would decorate your gazebo and explain your choice of style. (2-3 paragraphs in length)

Scoring Guide for Gazebo Project

Name _____

110 Points

Due Date: November 13, 2000

Days Late: 1 2 unaccepted after 2 days late
 -10 -20

Returns Scoring Guide: 0 2

Scale Drawing:

Scale indicated (includes actual dimensions)	0	2	4			
Drawn to indicated scale	0	2	4	6	8	10
Straight Lines	0	1	2	3	4	
Correct Shapes	0	1	2	3	4	
Units Labeled	0	1	2	3	4	
Neatness	0	2	4	6		
Computations Correct	0	2	4	6	8	

Construction of Scale Model:

Neatness	0	2	4	6	8	
Sturdiness	0	1	2	3	4	
Triangles for roof	0	1	2	3	4	
Regular base > 4 sides	0	2	4	6	8	
Scale matches actual dimensions	0	2	4	6	8	10
Walls are \perp rectangles	0	1	2	3	4	
Includes open doorway	0	1	2	3	4	
Includes at least 4 windows	0	1	2	3	4	

Explanations:

Correct Grammar	0	1	2	3	4	
Shows obvious research	0	1	2	3	4	
All steps explained in a clear easy to follow format	0	2	4	6	8	10

Total Points Earned _____