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# Placement Lab

### Dr. Bradford A. Towle Jr.

### Graphics

## Objectives

1. To understand the mathematics behind graphical transformations

## Equipment

1. A computer that runs Notepad ++ and has a modern web-browser

## Lab Preparation

1. Be sure you understand Chapter 4.

## Lab Instruction

1. Phase 1 – Creating an object
   1. I want you to create an 8-sided enclosed shape (It can have more sides if you wish)
2. Phase 2 – I want you to place three of these objects (Using transforms)
   1. One will go in the upper-center portion of canvas and it will rotate around the Y-Axis
   2. One will be placed in the lower left portion of canvas and it will rotate around the X-Axis
   3. One will be placed in the lower right portion of canvas and it will rotate around the Z-Axis
   4. These three shapes will NOT move
3. Phase 3
   1. If I click on the canvas (it does not matter where) create a new instance of the 8 sided shape in the middle of the canvas.
   2. The shape will not rotate but it will move in a single (random) direction off screen.

## Lab Rubric

|  |  |  |  |
| --- | --- | --- | --- |
|  | Perfect | Some errors or incomplete functionality (No-syntax errors) | Not acceptable |
| Phase 1 | 10 | 5 | 0 |
| Phase 2 | 20 | 15 | 0 |
| Phase 3 | 10 | 5 | 0 |
| Total | /40 | | |