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Total score: 100

Class PARTICIPATION on Lecture 5.doc ANSWER SHEET

(Out of 100 points. Please record your own total score!)

(Attach as score.doc!)

1. (25 points) What are **b**'s coordinates relative to frame **W** and **C₁**?

ANSWER:

$$b = (1, 1) \quad c_1 = (5, 3)w$$

2. (25 points) What are **c**'s coordinates relative to frame **W**, **C₁**, and **C₂**?

ANSWER:

$$c = (1, 1) \quad c_2 = (1, 3) \quad c_1 = (5, 5)w$$

3. (25 points) What is the value of projected point y_p ?

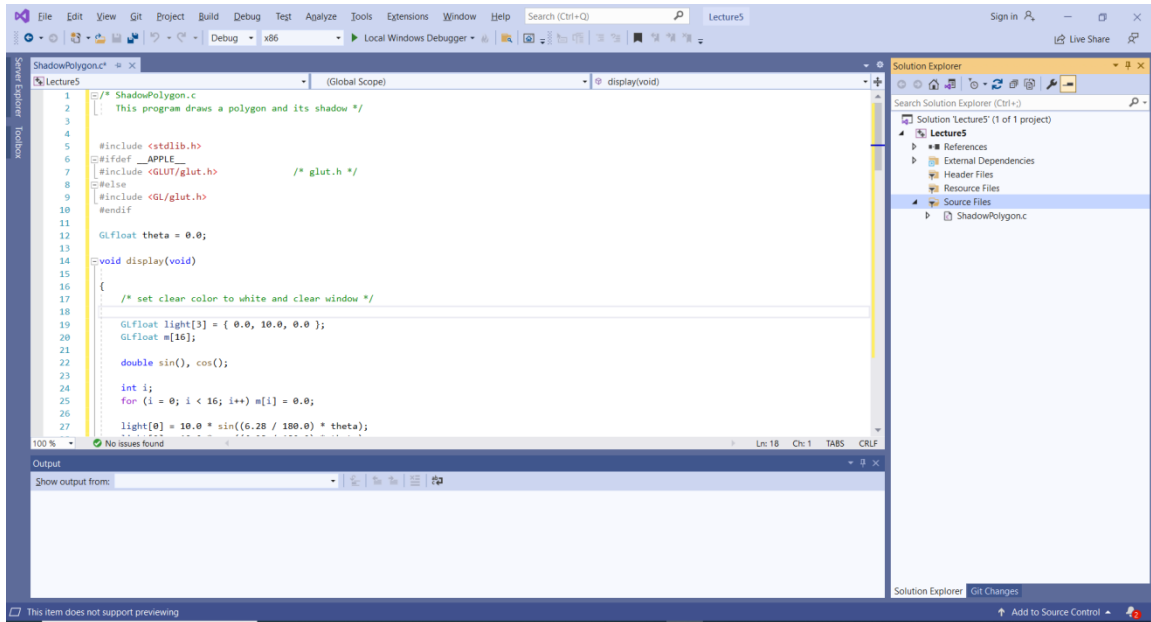
(HINT: You know y , z , and $z_p = d$)

ANSWER:

$$y_p = y / (z/d)$$

4. (25 points) Create **Lecture5** Empty Project:

Create c++ file **ShadowPolygon.c**:



```
1  /* ShadowPolygon.c
2  This program draws a polygon and its shadow */
3
4
5  #include <stdlib.h>
6  #ifdef __APPLE__
7  #include <GLUT/glut.h> /* glut.h */
8  #else
9  #include <GL/glut.h>
10 #endif
11
12 GLfloat theta = 0.0;
13
14 void display(void)
15 {
16     /* set clear color to white and clear window */
17
18     GLfloat light[3] = { 0.0, 10.0, 0.0 };
19     GLfloat m[16];
20
21     double sin(), cos();
22
23     int i;
24     for (i = 0; i < 16; i++) m[i] = 0.0;
25
26     light[0] = 10.0 * sin((6.28 / 180.0) * theta);
27 }
```

Build and run the project.

(Take print screen and insert here)

