CSCI 420 Computer Graphics

Helper slides, hw2 (roller coaster)

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Use std::vector to store complex geometry

```
#include <vector>
using namespace std;
vector<float> pos;
vector<float> uvs;

void addTriangle(float posA[3], float posB[3], float posC[3],
                          float uvA[2], float uvB[2], float uvC[2])
{
  pos.push_back(posA[0]); pos.push_back(posA[1]); pos.push_back(posA[2]);
  pos.push_back(posB[0]); pos.push_back(posB[1]); pos.push_back(posB[2]);
  pos.push_back(posC[0]); pos.push_back(posC[1]); pos.push_back(posC[2]);
  uvs.push_back(uvA[0]); uvs.push_back(uvA[1]);
  uvs.push_back(uvB[0]); uvs.push_back(uvB[1]);
  uvs.push_back(uvC[0]); uvs.push_back(uvC[1]);
}
```

Init the VBOs using std::vector

```
VBO vboPositions;
VBO vboUVs;

void initVBOs()
{
  const int numVertices = (int) pos.size() / 3;
  vboPositions.Get(numVertices, 3, pos.data(), GL_STATIC_DRAW);
  vboUVs.Get(numVertices, 2, uvs.data(), GL_STATIC_DRAW);
}
```