

**Math 155A - Fall 2020 - Quiz #1 - October 8, 2020 - 15 minutes**  
 Hand in answers to all questions (the whole sheet) as "Problem 1" on gradescope.

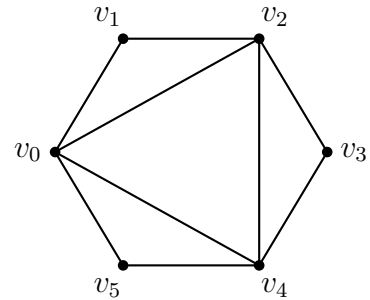
Integrity Signature: \_\_\_\_\_

START TIME:

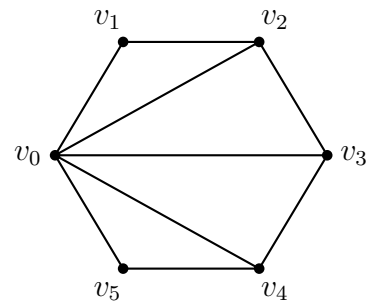
STOP TIME:

1. A hexagon can be tiled with triangles in several ways as shown below. For each question, answer by listing in the vertices in the correct order that would be used by a call to `glDrawArrays` using the specified rendering modes.

- (a) What order of vertices from  $v_0 - v_5$  should be used to render the four triangles shown to the right, when rendering using `GL_TRIANGLES` mode? If it is possible, make all four triangles front-facing as shown. How many vertices are in your list? Are all of your four triangles are front-facing?



- (b) What order of vertices from  $v_0 - v_5$  should be used to render the four triangles shown to the right, when rendering using `GL_TRIANGLE_FAN` mode? If it is possible, make all four triangles front-facing as shown. How many vertices are in your list? Are all of your four triangles are front-facing?



- (c) What order of vertices from  $v_0 - v_5$  should be used to render the four triangles shown to the right, when rendering using `GL_TRIANGLE_STRIP` mode? [Hint: Start with either  $v_0$  or  $v_3$ .] If it is possible, make all four triangles front-facing as shown. How many vertices are in your list? Are all of your four triangles are front-facing?

