Mini-quiz 4-05   Graph Theory – Spring '22   **Name:** ——————————————

1. (5 pts) Circle if each of the following statements is true or false. No justification needed, but you may get a 1pt bonus for a correct justification of (d) or (e).

(a) K_5 is planar.   **True**   **False**

(b) A graph G is planar if and only if G is spheroidal.   **True**   **False**

(c) $K_{3,4}$ is toroidal (that is, $K_{3,4}$ can be embedded with no edge crossings on the torus).   **True**   **False**

(d) Any graph G which is spheroidal is also toroidal.   **True**   **False**

(e) If G is a maximal planar graph with $p \geq 4$ vertices, then $\delta(G) \geq 3$.   **True**   **False**