1. In the homework readings, ETSU's Bob Gardner hypothesizes that it took until Riemann's work in the 1850s to recognize the sphere as a valid model because

   a) no one was working on the sphere until Riemann
   b) in *Sphaerica* the sphere was considered embedded in Euclidean space, rather than as a geometry in of itself
   c) lines on the sphere are finite in length
   d) more than one of the above
   e) none of the above

2. In the homework readings, the Poincare disk model has

   a) triangles with angle sums less than π
   b) infinite parallels to a line through a point off of the line
   c) infinite length lines
   d) more than one of the above, but not all
   e) all of the above

3. In homework 5, you should have calculated (for a round torus):

$$E = r^2 \quad F = 0 \quad \text{and } G = (R + r\cos u)^2$$

   To calculate the surface area of the round donut (mmmm frosting):

   a) $\int_0^{2\pi}\int_0^{2\pi} r^2(R + r\cos u)^2 \text{ dv du}$
   b) $\int_0^{2\pi}\int_0^{2\pi} r(R + r\cos u) \text{ dv du}$
   c) $4\pi^2 rR$
   d) more than one holds
   e) none of the above

1. d (b and c)
2. e
3. b (and c if you know that)