LA session- Sections 2.3 & 2.4

1. Can the equation of every line be written in slope-intercept form? Why?

2. Does every line have exactly one x-intercept and one y-intercept? Are there lines that have no intercepts?

3. What can you say about two lines that have equal slopes and equal y-intercepts?

4. What can you say about two lines that have the same x-intercept and the same y-intercept? Assume the x-intercept is not 0.

5. If two distinct lines have the same slope, but different x-intercepts, can they have the same y-intercept?

6. Which of the following equations might have the graph shown? (More than one answer is possible.)
   (a) \((x - 2)^2 + y^2 = 3\)
   (b) \((x + 2)^2 + y^2 = 3\)
   (c) \(x^2 + (y - 2)^2 = 3\)
   (d) \((x - 2)^2 + y^2 = 4\)
   (e) \(x^2 + y^2 + 10x + 16 = 0\)
   (f) \(x^2 + y^2 + 10x - 2y = 1\)
   (g) \(x^2 + y^2 + 9x + 10 = 0\)
   (h) \(x^2 + y^2 - 9x - 10 = 0\)

7. If the circumference of a circle is \(6\pi\), what is its radius?