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You may use only your notes/readings - nothing and no one else, internet or in person.
Hand in at the start of class on Friday.
Show all work; final answers only receive no credit. Work must be neat and legible.

1. Solve the following one-dimensional inequalities, giving your answer in interval notation.
a) $|x-9|>6$
b) $2 x^{2}-7 x \geq 4$
2. Lines.
a) Find the equation of the line through the point $(-4,1 / 2)$ with a slope of 0 .
b) Find the equation of the line perpendicular to $x-6 y=1$ through the point $(3,-3)$. Use the point-slope form of the line.
c) Rewrite it in slope-intercept form.
3. Circle.
a) Find the center and radius of the circle $x^{2}+2 x+y^{2}-y=3$ by completing the squares.
b) Find the $x$-intercepts.
c) Sketch an accurate graph of the circle.
d) The $y$-intercepts are irrational, one positive and one negative. You need the quadratic formula to find them. Do so. Check your sketch and see if it's believable.
