Math 6: Homework 2.8

Geometry review:

- 1. a) Draw the graph of the equation $x^2 + y^2 4 = 0$.
 - b) Draw the graph of the equation $(x + 3)^2 + (y 1)^2 1 = 0$.
 - c) Draw the graph of the equation xy = 0.
 - d) Draw the graph of the equation $x^2 + y^2 = 0$.
- Find the height and area of the figure below. Lengths of three sides are given; the two marked angles are right angles.



3.

Let ABCD be a quadrilateral such that AB = BC = CD = AD (such a quadilateral is called rhombus). Let M be the intersection point of AC and BD.

- (a) Show that $\triangle ABC \cong \triangle ADC$
- (b) Show that $\triangle AMB \cong \triangle AMD$
- (c) Show that the diagonals are perpendicular and that the point M is the midpoint of each of the diagonals.



- 4. Given three lengths *a*, *b*, *c*, construct a triangle with sides *a*, *b*, *c*.
- a) _____
- b) _____
- c) _____
- 5. Draw a circle and find its center
- 6. We were looking at the problems from geometry quiz on this website:

https://www.mathgametime.com/games/geometry-quiz

You can try to get as many points as you can, and we will find the winner

(A proof is required – a photo/screenshot with your final score)