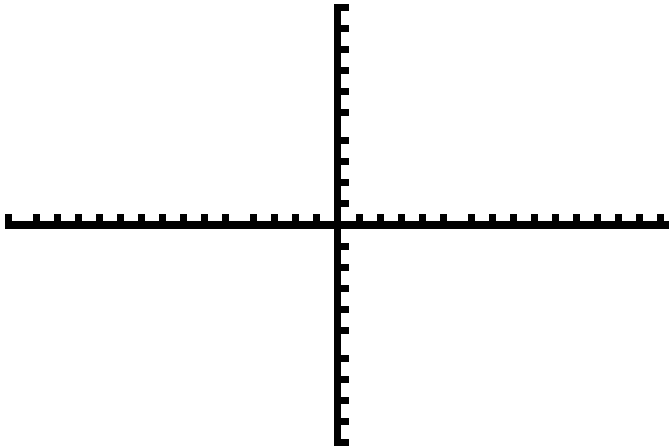


MA180 Spring 2007 Extra Credit Quiz 1B to be Added to Quiz 1

Name: \_\_\_\_\_

- 1) Find the center  $(h, k)$  and radius  $r$  of the following circle and graph the circle  
 $x^2 + y^2 - 4x + 8y + 11 = 0$



- 2) Solve  $\sqrt{2x+3} - \sqrt{x+1} = 1$

3) David has available 400 yards of fencing and wishes to enclose a rectangular area.

a) Express the area  $A$  of the rectangle as a function of the width  $x$  of the rectangle.

b) What is the domain of  $A$ ?

4) Let  $P = (x, y)$  be a point on the graph of  $y = x^2 - 8$

a) Express the distance  $d$  from  $P$  to the origin as a function of  $x$ .

b) What is  $d$  if  $x = 0$ ?

c) What is  $d$  if  $x = 1$ ?

d) Use your calculator to graph  $d(x)$

e) For what values of  $x$  is  $d$  smallest?