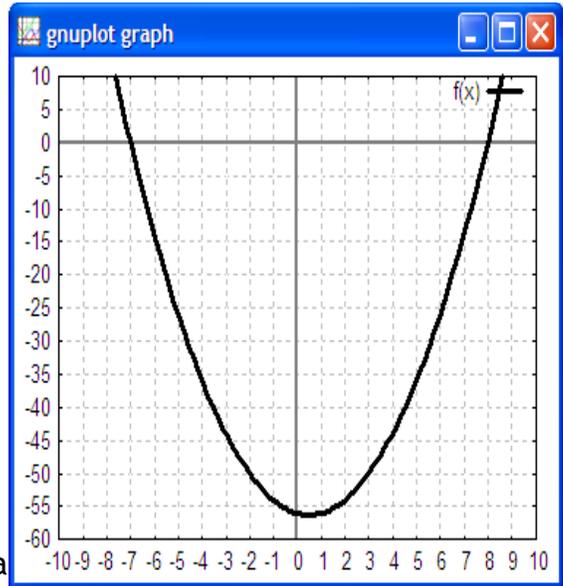
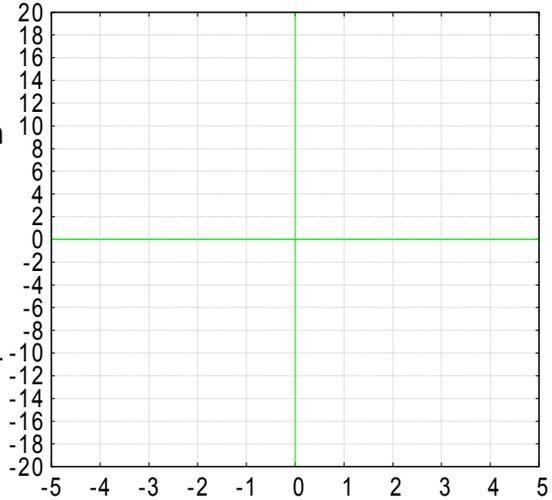


MS 100 College Algebra test one fall 2006 Name:

1. For the equation  $y = -x^2 + 2x + 8$ 
  - a. \_\_\_\_\_ Find the degree.
  - b. \_\_\_\_\_ Is the lead coefficient positive or negative?
  - c. \_\_\_\_\_ Will the graph open up (U) or open down (∩)?
  - d. \_\_\_\_\_ Find the y-intercept.
  - e. \_\_\_\_\_, \_\_\_\_\_ Find the x-intercepts.
  - f. \_\_\_\_\_ Solve  $2ax + b = 0$  for x to find the x-value for the vertex.
  - g. Make a graph of the equation using the above information.
  - h. \_\_\_\_\_ What is the name of the shape produced by this equation?
  - i. \_\_\_\_\_  
Toughie: Use slope  $m = 2ax + b$  to find the linear equation for the slope.



2. For the graph shown on the right, determine the equation.

y =

3. x = \_\_\_\_\_ Solve for x:  $\frac{7x}{3} - 210 = x + 210$

4. Is  $x(x + 30) + 221 = (x + 13)(x + 17)$  an identity or a conditional statement?

5. y = \_\_\_\_\_ Find the y-intercept for  $y = x^2 - 2x - 323$

6. \_\_\_\_\_, \_\_\_\_\_ Find the x-intercepts for  $y = x^2 - 2x - 323$

7. \_\_\_\_\_ Rice selling for \$18.00 is marked down 15%. What is the sale price?

8. \_\_\_\_\_ I covered five kilometers in a thirty minute run from Piyuul to Fulkrin and back. Calculate my pace in minutes per kilometer.

9. \_\_\_\_\_ At the pace calculated in problem eight, how long would it take me to run twelve kilometers from Piyuul to Inkoyac?