Practice 5-7

SHOW WORK ON SEPARATE SHEET

Rewrite each equation in vertex form. Then find the vertex.

(1) $y = x^2 + 4x - 6$

(2) $y = x^2 - 6x + 6$

(3) $y = 2x^2 + 4x - 5$

(4) $y = 4x^2 + 8x - 4$

Solve each quadratic equation by completing the square.

(5) $3x^2 = -12x - 3$

(6) $4x^2 - 8x + 1 = 0$

(7) $x^2 - x - 5 = 0$

(8) $x^2 + 12x + 4 = 0$

(9) $2x^2 = -4x + 5$

Review

(10) A rock club's profits, p, can be modeled by the function $p = -15x^2 + 600x + 50$, where t represents the ticket price in dollars.

Define variables $x =$ $P =$

a) Find the maximum profit.

b) Find the amount of tickets needed to obtain the maximum profit.

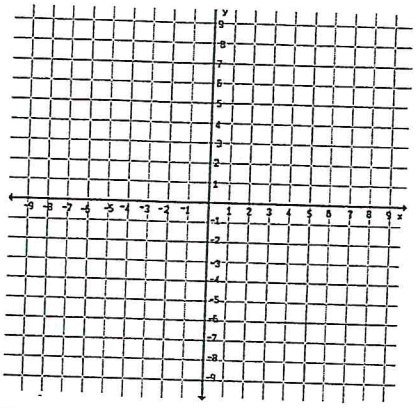
c) What is the maximum price they could charge?

d) What is a reasonable domain and range?

(Solve algebraically or graphically.)

Graph the given equation using our 4 step process!

(11) $y = x^2 - 4x - 5$



a) LOS

b) Vertex

c) Use a for "slope" to get 2 more points

d) Find y-int + its symmetrical partner

Need 5 points total

(12) $f(x) = 4(x+2)^2 - 7$