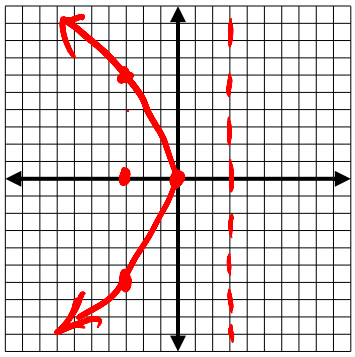
re-Calc
Worksheet #2 – Parabolas

Name Solutions

Write an equation in standard form for each Parabolas.

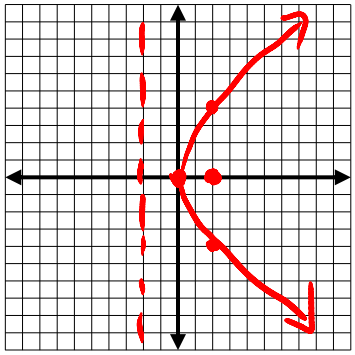
a) Vertex $(0,0)$; focus $(-3,0)$

$y^2 = -12x$



b) Vertex $(0,0)$; directrix $x = -2$

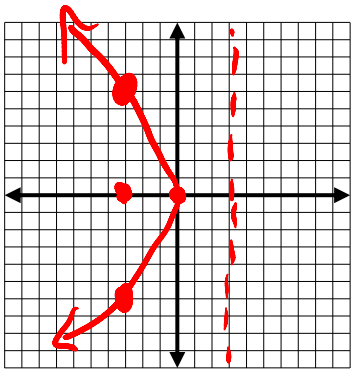
$y^2 = 8x$



c) Vertex $(0,0)$; opens to the left, focal width = 12

$4p = 12 \quad p = 3$

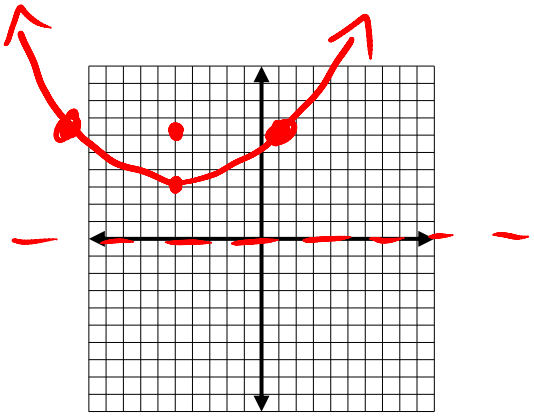
$y^2 = -12x$



d) Focus $(-5,3)$; vertex $(-5,6)$

$p = 3$

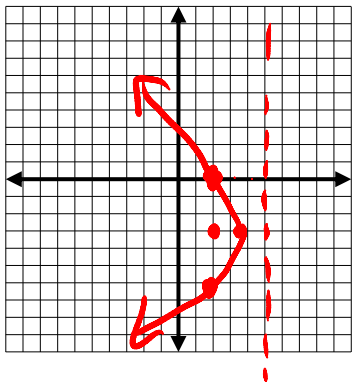
$(x+5)^2 = 12(y-6)$



e) Focus $(2,-3)$ and directrix x =5

$V(3\frac{1}{2}, -3)$ $p = 1\frac{1}{2}$

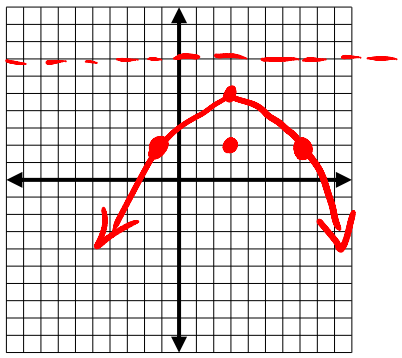
$(y+3)^2 = -6(x-3\frac{1}{2})$



f) Vertex $(3,5)$ and directrix y = 7

$p = 2$

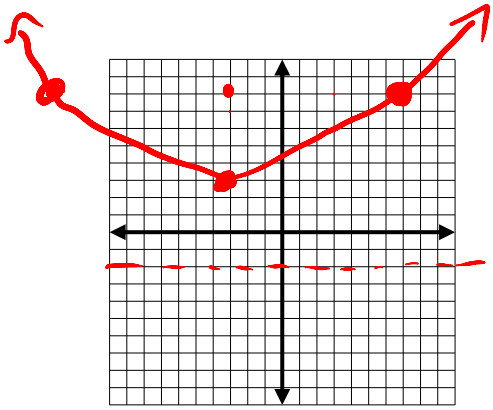
$-8(y-5) = (x-3)^2$



g) Vertex $(-3,3)$, opens upward, and focal width 20

$4p = 20$ $p = 5$

$20(y-3) = (x+3)^2$



h) Vertex $(2,3)$, opens right, and focal width 5

$4p = 5$ $p = \frac{5}{4} = 1.25$

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