Geometry Board Problems - Day 95 Parabolas

No calculator. Yes magnetic graphs

1.) First person, one marker. Write the equation in standard form and graph given the focus is at (3, -4) and the vertex is at (1, -4) and it opens right.

- Answer: p = 2 so 4p=8=a
- Answer: $(y + 4)^2 = 8(x - 1)$

2.) New person, erase all. Write the equation in standard form and graph given the focus is at (-2, 4) and the directrix is y = 1.

- Answer: p = 3 so 4p=12 = a
- Answer: $(x + 2)^2 = 12(y - 4)$

3.) New person, erase all. Write the equation and graph given the focus is at (2, 1), it opens left, and contains the point (2, 5)

- Answer: V(2-p, 1)
- Answer: $(y - k)^2 - 4p(x - h)$
- $(5 - 1)^2 - 4p((2 - (2 - p))$
- $16 = 4pp$

  $4 = p^2$

  $p = + / - 2$

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

  Opens left, V(4, 1)