$<, >, \leq, \geq$ → boundary line? shading?

* $y = mx + b$ → line
  - slope
  - y-int

* $y = x^2 + k$ → parabola
  - vert shift

* $(x-h)^2 + (y-k)^2 = r^2$ → circle
  - center: (h, k) radius: r

h?
→ Ch 9
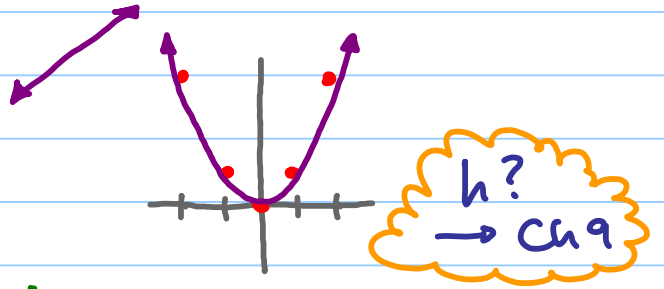
ex 1) Graph $\begin{cases} y \geq x^2 - 4 \\ x - y \geq 2 \end{cases}$

$y \geq x^2 - 4$ → down 4 parabola • solid • above → the vertex

$x - y \geq 2$ → $-y \geq -x + 2$ → $\boxed{y \leq x - 2}$ line • solid • below

ex 2) Graph $\begin{cases} (x+2)^2 + (y-1)^2 < 9 \\ y \geq x^2 + 2 \end{cases}$

$(x+2)^2 + (y-1)^2 < 9$ h   k   r: $\sqrt{9}$ • dashed • inside circle: c: $(-2, 1)$ r: 3

$y \geq x^2 + 2$ parabola up 2 • solid • above vertex

ex 3) Graph $\begin{cases} x + y > 5 \\ x + y \leq -1 \end{cases}$ → $\begin{array}{l} y > -x + 5 \\ y \leq -x - 1 \end{array}$ } lines

no overlap!
→ no solution $\emptyset$