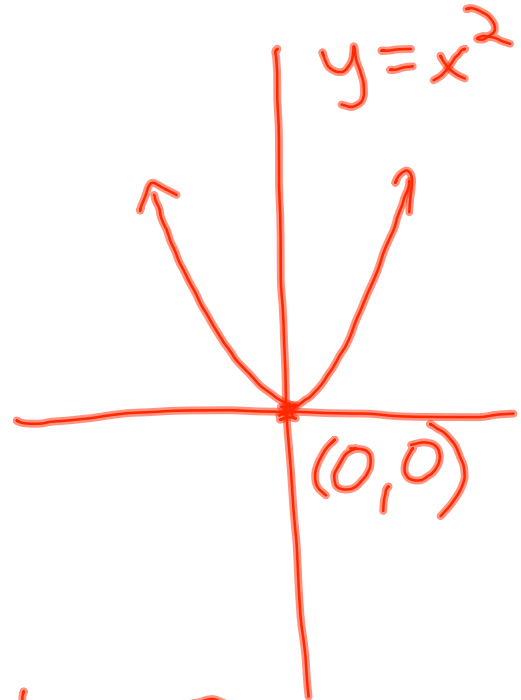
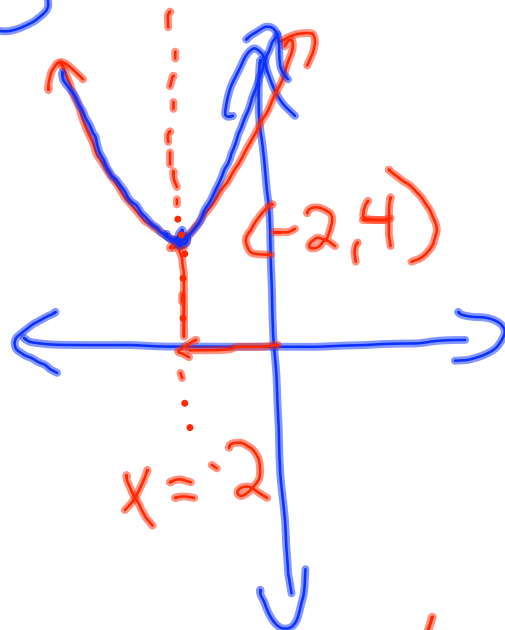


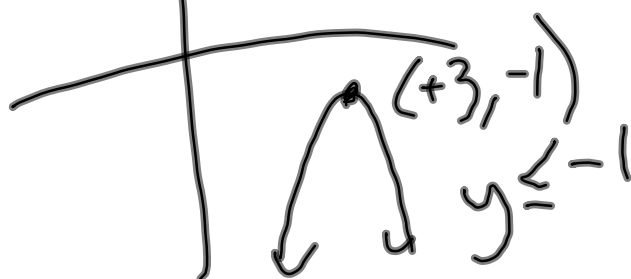
Quadratic Functions

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



What is the domain, ?
range + axis of symmetry?

$$x \in \mathbb{R} \quad y \geq 4$$



$$\underline{\underline{x = -2}}$$

Graph the following &
determine:

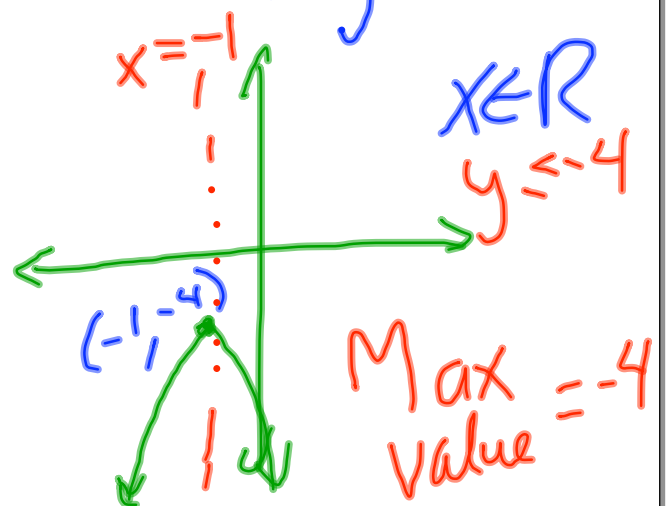
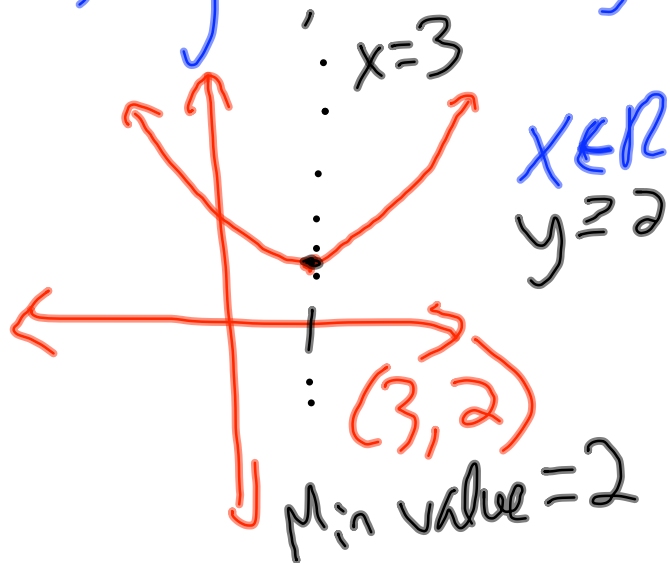
a) the vertex

b) the domain & range

c) the eqn. of axis of symmetry

d) maximum or minimum value

a) $y = 0.5(x-3)^2 + 2$ b) $y = -2(x+1)^2 - 4$



Finding x & y intercepts graphically

Graph

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

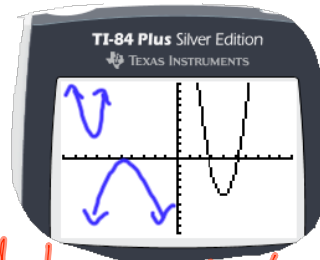
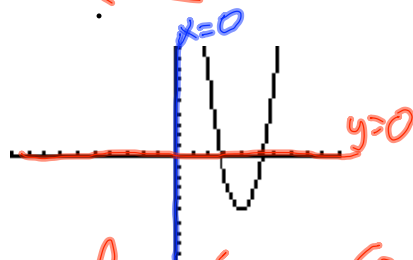
& find the intercepts

y intercepts

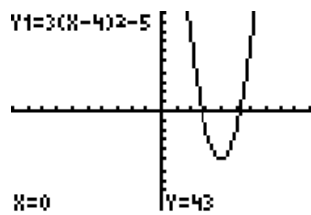
$$x = 0$$

x intercepts

$$y = 0$$



→ always 1 y intercept - could have 0, 1 or 2 x intercepts

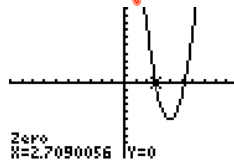


To find y intercept hit **Trace** $x=0$

Enter

Find x intercepts

- 1: value
- 2: zero
- 3: minimum
- 4: maximum
- 5: intersect
- 6: dy/dx
- 7: ∫f(x)dx



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