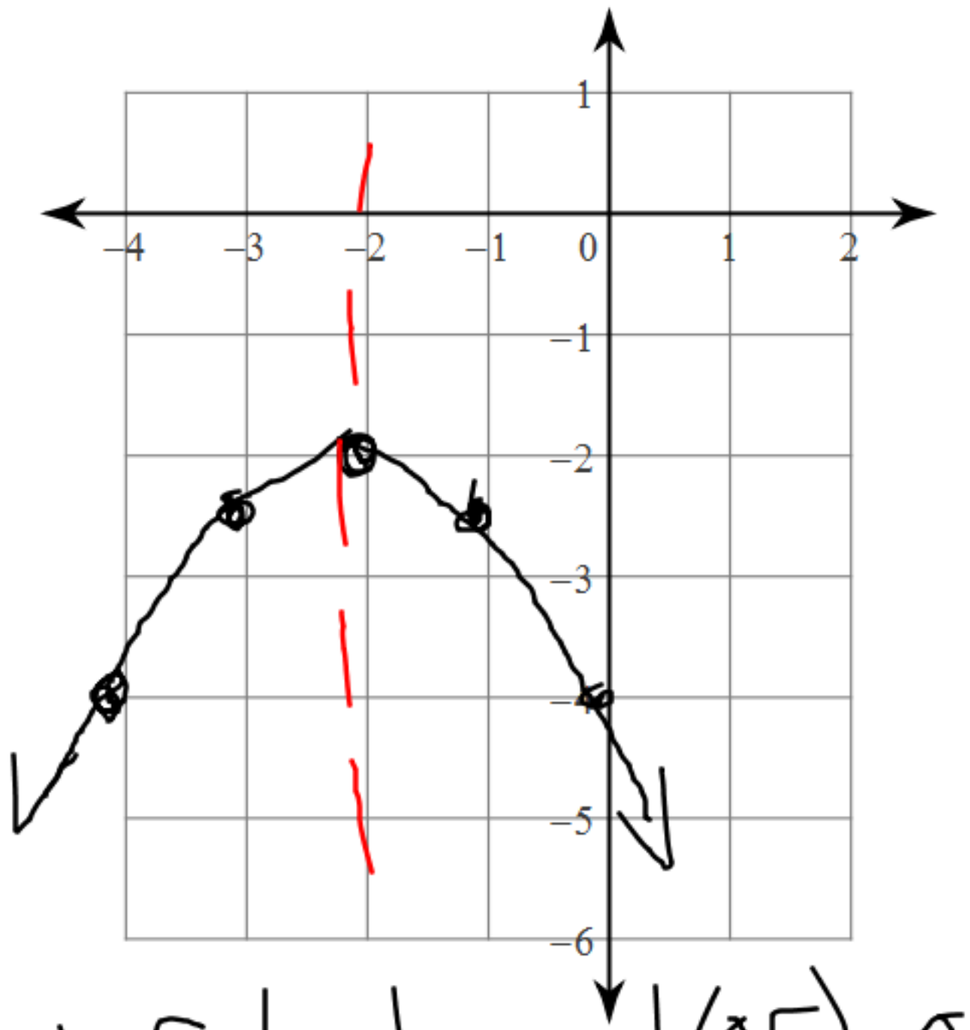
Sketch the graph of each function. State the horizontal and vertical shifts, max/min, stretch/shrink, axis of symmetery, direction of openning, and the vertex

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



vertex → (−2, −2)

h.s. → 2 left

v.s → 2 down

max

stretch by $\frac{1}{2}$

a.0.5 → $x = -2$

opening down

over 1, down 1(0.5)=0.5

over1, down 3(0.5)=1.5

Show

Sketch the graph of each function. State the horizontal and vertical shifts, max/min, stretch/shrink, axis of symmetery, direction of openning, and the vertex

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

x y

Vertex (-2, -1)

h.s. →

v.s

a.os → x = -2