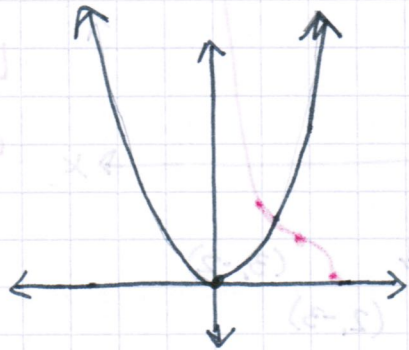


# RESTRICTED DOMAIN AND RANGE

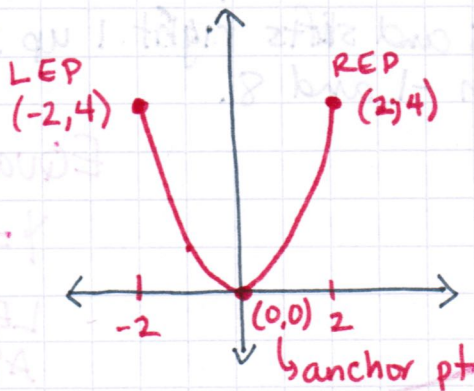
$$y = x^2$$

$$D: \mathbb{R}$$

$$R: \mathbb{R}_{\geq 0}$$



now restrict it btwn x values  
of 2 and -2



Left end pt  $(-2, 4)$

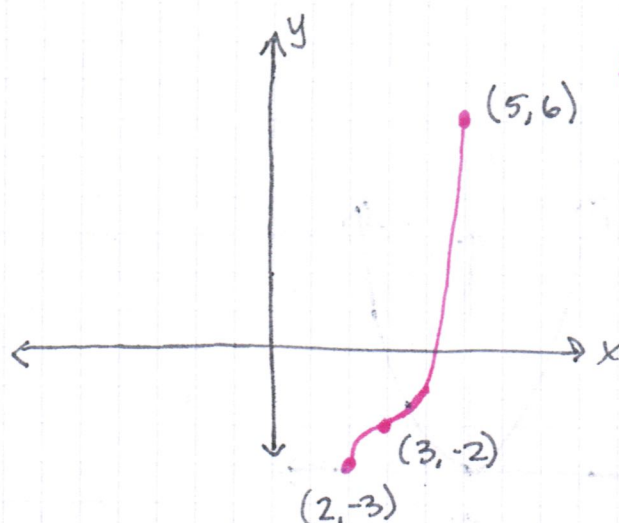
anchor pt  $(0, 0)$

Right end pt  $(2, 4)$

$$D: -2 \leq x \leq 2$$

$$R: 0 \leq y \leq 4$$

EX2] Draw <sup>and write equation for</sup> a cubic function that shifts 3 right, 2 down from x values between 2 and 5



EQUATION:

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

Left end pt (2, -3)

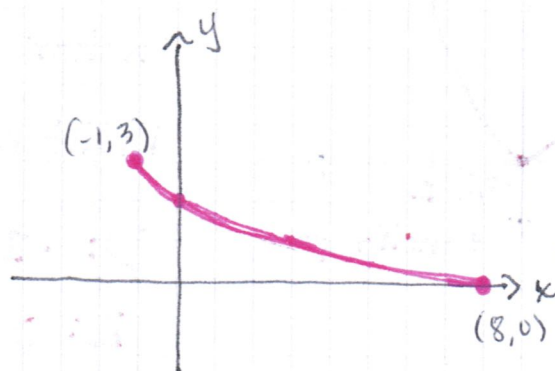
anchor pt (3, -2)

Right end pt (5, 6)

$$D: 2 \leq x \leq 5$$

$$R: -3 \leq y \leq 6$$

EX3] Write and draw equation for square root function flips over x-axis and shifts left 1 up 3 from x values between -1 and 8.



EQUATION:

$$y = -\sqrt{x+1} + 3$$

LEP (-1, 3)

AP (-1, 3)

REP (8, 0)

$$D: -1 \leq x \leq 8$$

$$R: 0 \leq y \leq 3$$