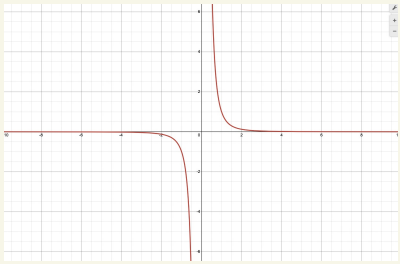
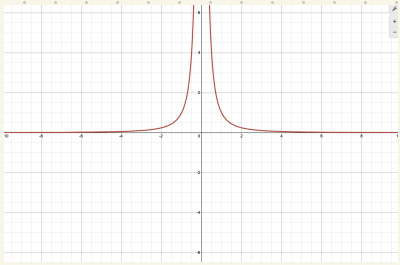
01/04/2023 2.3, 2.4 HW

2.3

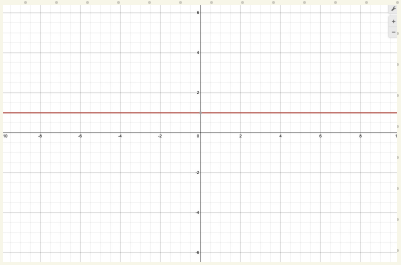
(1) (a)



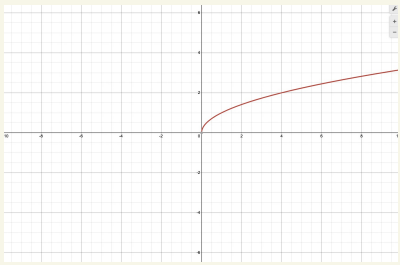
(b)



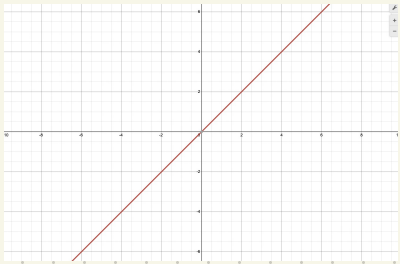
(c)



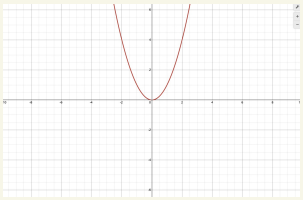
(d)



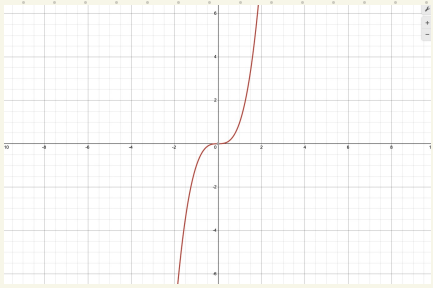
(e)



(f)



(g)



(5) (a) The function is even when the graph continues in the same direction on both ends, and it is odd when the graph continues in different directions

(b) If $a > 0$ the graph will have a positive Y value when $x > 0$, and if $a < 0$ the Y will be negative when $x > 0$

(c) $Y = -4x^3$, $Y = -x^3$

2.4

(1) (a) $Y = \sqrt{3-x}$

$3 - x \geq 0$

$+x \quad +x$

$3 \geq x$

$\boxed{3 \geq x}$

(b) $Y = \frac{1}{x-3}$

$x - 3 \neq 0$

$+3 \quad +3$

$x \neq 3$

$\boxed{x \neq 3}$

(e) $y = \frac{1}{x^2-5x+6}$

$x \neq 2, 3$

$x^2-5x+6 \neq 0$

$(x-2)(x-3) \neq 0$

$x \neq 2, 3$

(f) $y = \sqrt{x^2-9}$

$x \geq 3$

$x^2-9 \geq 0$

$+9 \quad +9$

$x^2 \geq 9$

$x \geq 3$