AK

Find the domain and range of the function. (C)

$$f(x)=\sqrt{64-x^2}$$

D: $-8 \le x \le 8$

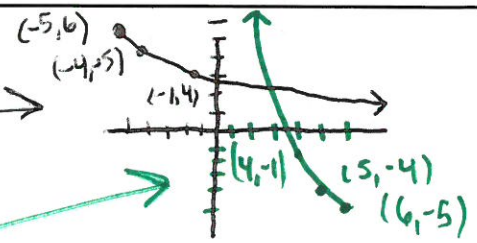
R: $0 \le y \le 8$

Sketch a graph f(x), find the inverse function and graph the inverse. (NC)

$$f(x)=-\sqrt{x+5}+6$$

D: $x \ge -5$

R: $y \le 6$



$F^{-1}(x) = \left(\frac{x-6}{-1}\right)^2 - 5$

$F^{-1}(x) = (6-x)^2 - 5$

For $x \le 6$

Determine if the function is even, odd or neither. (NC)

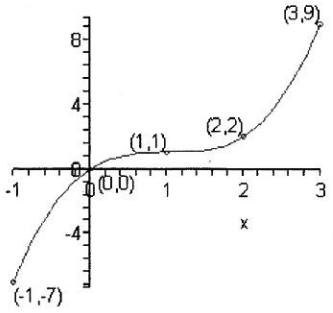
$$f(x)=\frac{x^4-3x^2}{6-x^6}$$

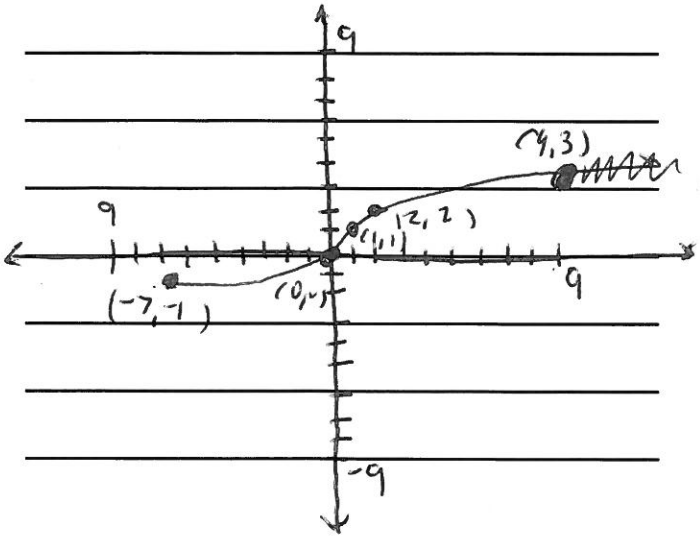
$F(-x) = \frac{(-x)^4 - 3(-x)^2}{6-(-x)^6} = \frac{x^4-3x^2}{6-x^6}$

$F(x) = F(-x)$

Even

Sketch a graph of $f^{-1}(x)$. (NC)





Given $g(x) = \left| (\sqrt{2-x})^2 + \frac{3}{x+1} \right| - 2$ (c)

Find:

a) The domain of g.
b) The range of g.
c) The zeros of g. Minimum
d) Any relative ~~maximum~~(s).
e) x where $g^{-1}(x) = -3$.

$g(-3) = x$

a) $x \in (-\infty, -1) \cup (-1, 2]$

b) $y \geq -2$

c) (1.3, 0) (−1.54, 0) (−2.3, 0)

d) (−1.79, −2)

e) $x = 3/2$

Given $f(x) = -(x+3)^2 + 5$ (NC)

Find:

Three points on $f^{-1}(x)$.

The Domain of $f^{-1}(x)$

↳ Range $y \leq 5$

↳ $x \leq 5$

Points on $f(x)$

(0, −4) (1, −11) (2, −20)

(−4, 0) (−11, 1) (−20, 2)