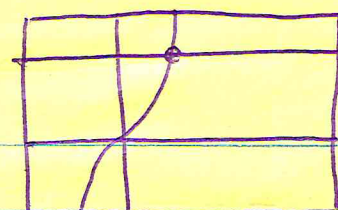


Alg 2
Ch 6

Review 6.1-6.4

1. $y_1 = 1600x^3 + 1200x^2 + 800x$

$y_2 = 4000$



$x \approx 1.048$

$r = x - 1 = 1.048 - 1 = .048$

$.048 = 4.8\%$

$[-2, 3]$ by $[-1000, 5000]$

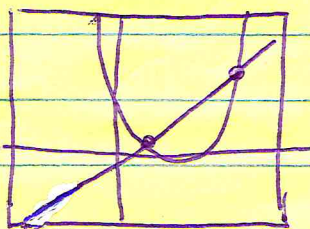
You would need an interest rate of 4.8% to save \$4000 from your job after 3 years.

2a) $y_1 = 2x^2 - 4x$

$y_2 = 10x - 1$

$x \approx .072$

$x \approx 6.928$



$[-8, 8]$ by $[-20, 100]$

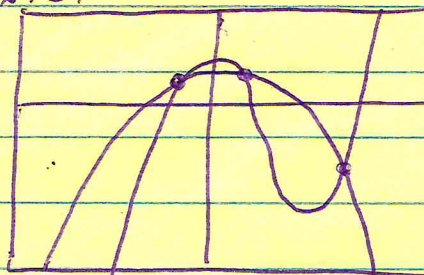
b) $y_1 = 2x^3 - 15x^2 + 4x + 21$

$y_2 = -x^2 + 20$

$x \approx -1.59$

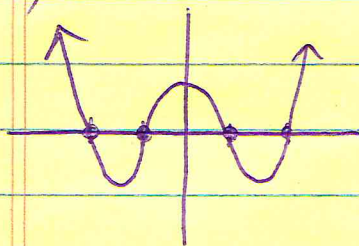
$x \approx 4.69$

$x \approx 6.690$



$[-15, 15]$ by $[-100, 50]$

3. $x = \pm 1, x = \pm 2 \in B$ $f(x) = x^4$ $\curvearrowright$ $\curvearrowright$



4. Verify (ans vary)

Prove

$(a-2b)^3$

$(a-2b)(a-2b)(a-2b)$

$(a^2 - 2ab - 2ab + 4b^2)(a-2b)$

$(a^2 - 4ab + 4b^2)(a-2b)$

$a^3 - 4a^2b + 4ab^2 - 2a^2b + 8ab^2 - 8b^3$

$a^3 - 6a^2b + 12ab^2 - 8b^3 = a^3 - 6a^2b + 12ab^2 - 8b^3 \checkmark$

5. Verify (ans vary)

Prove

$(a-b)^3$

$(a-b)(a-b)(a-b)$

$(a^2 - ab - ab + b^2)(a-b)$

$(a^2 - 2ab + b^2)(a-b)$

$(a^3 - 2a^2b + ab^2 - a^2b + 2ab^2 - b^3)$

$a^3 - 3a^2b + 3ab^2 - b^3$

$a^3 - b^3 - 3a^2b + 3ab^2 = a^3 - b^3 - 3a^2b + 3ab^2$