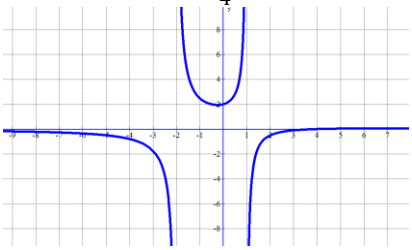
Final Review #1 Key **Secondary 3 Honors**

1a) $f^{-1}(x) = \sqrt{x+3} + 4$
f(x) D: $x \geq 4$ R: $y \geq -3$
$f^{-1}(x)$ D: $x \geq -3$ R: $y \geq 4$

b) $\log_5(x+2) + 1 = f^{-1}(x)$
f(x) D: $\mathbb{R}$ R: $y > -2$
$f^{-1}(x)$ D: $x > -2$ R: $\mathbb{R}$

2. ↓↓
3. ↓↑
4. ↑↑
5. ↑↓
6. x = 0, 2, -1
7. x = 0, ½, -1
8. positive: (-1.73, 0), (1.73, ∞)
   Negative: (-∞, -1/73), (0, 1.73)
9. Positive: (-∞, 3), (3, ∞)
10. Positive: (0, 4)
    Negative: (-∞, 0), (4, ∞)
11. Yes
12. No
13. Yes
14. x = 1.67
15. x = -0.305
16. x = 272.99
17. VA: x = 1, x = -2
    HA: y = 0
    Hole @ (-3, $-\frac{7}{4}$)



18. 6
19. No solution
20. $\frac{a(a+2)}{a+5}$
21. -4
22. x = -5
23. 173
24. $2x^2 + 11$

25a) $4(2x-3)(3x+1)$
b) $81(x+1)(x-1)$
c) $(x+2)(x-2)(2x-3)$
d) $(x+1)(x-1)(x+3)(x-3)$
e) $7(x+3)(x^2-3x+9)$
f) $5(x^2-3)(x+2)$
g) $(2x+5)(7x-3)$
h) $2(x^4+16)(x^2+4)(x+2)(x-2)$