

1. $2x^2 - 5x - 4 = 0$

$x =$

2. $\sqrt{3x+25} = x+7$

$x =$

$g(x) = 2x - 11$

$(f-g)(x) =$

3. $f(x) = 2x^2 + 3x + 6$

$((f \circ g)(-1)) =$

4. $f(x) = -2x + 5$

$g(x) = 2x - 3$

5. $f(x) = x^2 + 6x + 3$

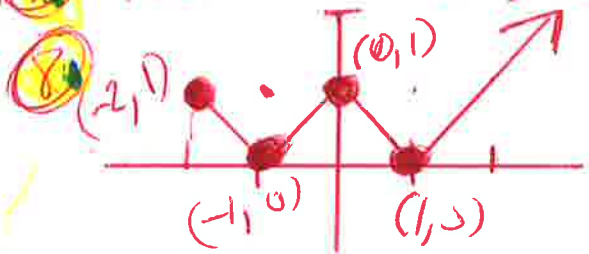
$\frac{f(x+h) - f(x)}{h} =$

Final Exam Review

6. $f(x) = |x - 4| - 5$ graph

$(g \circ f)(x) =$

7. $f(x) = 2x^2 + 3$, $g(x) = 3x - 11$



find domain and range

9. $f(x) = \sqrt{2x - 4}$

find domain

understands



10. $f(x) = \begin{cases} 2x+1 & \text{if } x < 1 \\ -2x-1 & \text{if } x \geq 1 \end{cases}$

graph

11. $f(x) = x^2 - 4x + 3$

graph (Find vertex, x and y-intercepts)

12. $f(x) = -2x^2 - 8x - 6$

graph (Find vertex, x and y-intercepts)

13. $9x^3 + x^2 - 36x - 4 = 0$

$x =$

use synthetic division

14. $f(x) = \frac{4x^2 - x - 11}{x^2 + 3x + 2}$

find vertical and horizontal asymptotes

15. $f(x) = \frac{4x^2 + 3x - 77}{x+1}$

find the oblique asymptote

16. $f(x) = 2x - 5$

find the inverse $f^{-1}(x)$

17. $9^{x+1} = 81^{x+1}$

$x =$

18. $\log_2(x+500) = 3$ \leftarrow $x =$

19. $A = P(1 + \frac{r}{n})^{nt}$ $P = 10,000, r = 9.3\%, N = 12, t = 6$ $A =$

20. $\ln(x) + \ln(x-1) = \ln(12)$ $x =$

21. $100e^{0.10x} = 200$ $x =$

22. $f(x) = \ln(-2x+10)$ find domain

Final Exam Review

23. $3x + 2y = 5$
 $x - 7y = -6$ $(x, y) = (,)$

24. $x + y - z = 1$
 $3x - 2y + z = 2$
 $11x - 2y - 3z = 6$ $(x, y, z) = (, ,)$

25. $\sum_{x=1}^{400} (2x)$ Sum =

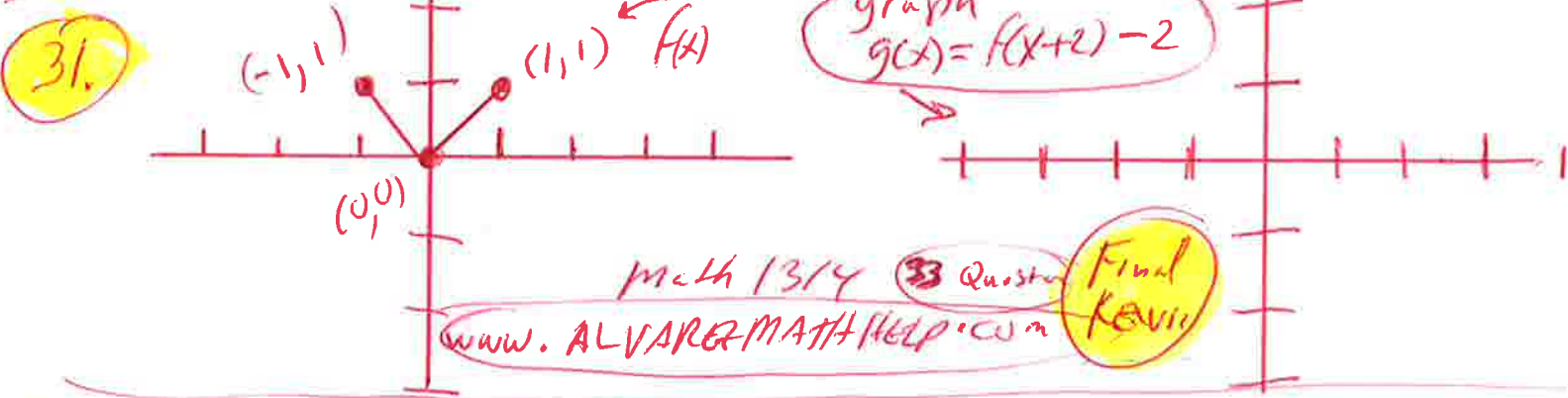
26. $(x+2)^3$ expand = use binomial theorem OR other method

27. find distance between $(-5, -7)$ $(-1, -4)$

28. find midpoint $(-5, -7)$ $(-1, -4)$

29. $x^2 + y^2 - 6x - 4y - 3 = 0$ find center, radius, and graph

30. Graph $f(x) = x^2$ and $g(x) = (x+2)^2 - 9$



32) $f(x) = 1000 \log(10 - (\frac{9}{360})x)$ (Balance on Credit Card) (what you owe) Part 3
 find

- $f(0) =$
 $f(50) =$
 $f(120) =$
 $f(240) =$
 $f(360) =$

FINAL EXAM REVIEW

33) Graph $f(x) = 1000 \log(10 - (\frac{9}{360})x)$ (Balance on Credit Card) (what you owe)
 $g(x) = 21x$ (min payment per month)

Window
 $x\text{-min} = 0$
 $x\text{-max} = 360$
 $y\text{-min} = -100$
 $y\text{-max} = 1200$

