

Trig Review Ch. 3

p 198 SGR
11-33 o.k.s +

MCT. 3.1-3.4 is Fri.

Quiz 3.3-3.4 today

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3.3

Graph each inequality.

23. $y > |x + 2|$

25. $y < (x + 1)^2 + 2$

3.3

Solve each inequality.

27. $|4x + 5| > 7$

$$\begin{array}{r}
 | -16 + 5 | > 7 \\
 | -9 | > 7 \\
 9 > 7 \\
 | 4x + 5 | \\
 9 > 7 \\
 4x + 5 = -7 \\
 \begin{array}{r}
 -5 \quad -5 \\
 \hline
 4x = -12 \\
 \frac{4}{4} \quad \frac{4}{4} \\
 x = -3
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 | 4x + 5 | = 7 \\
 \begin{array}{r}
 -5 \quad -5 \\
 \hline
 4x = 2 \\
 \frac{4}{4} \quad \frac{4}{4} \\
 x = \frac{1}{2}
 \end{array}
 \end{array}$$

$x > \frac{1}{2}$
 $x < -3$

3.4

Graph each function and its inverse.

29. $f(x) = 3x - 1$

30. $f(x) = -\frac{1}{4}x + 5$

32. $y = (x + 1)^2 - 4$

$$x = (y + 1)^2 - 4$$

$$+4 \quad +4$$

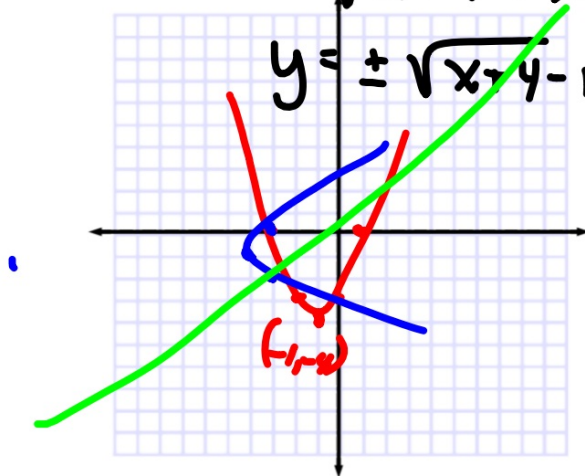
$$\sqrt{x+4} = \sqrt{(y+1)^2}$$

Strategies:

Maybe use f^{-1} equation

Maybe use (a,b) & (b,a)

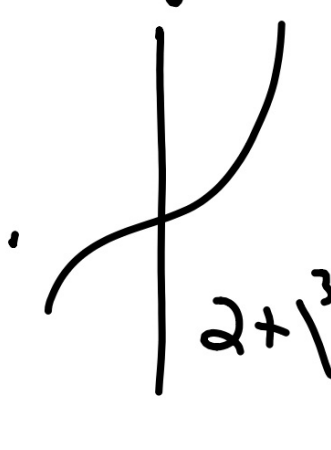
Maybe use reflection $y=x$



3.4

Find $f^{-1}(x)$. Then state whether $f^{-1}(x)$ is a function.

33. $f(x) = (x - 2)^3 - 8$


$$x = (y - 2)^3 - 8$$
$$x + 8 = (y - 2)^3$$
$$2 + \sqrt[3]{x + 8} = y - 2$$

3.1

Determine whether the graph of each function is symmetric with respect to the x -axis, y -axis, the line $y = x$, the line $y = -x$, or none of these.

15. $xy = 4$

16. $x + y^2 = 4$

17. $x = -2y$

18. $x^2 = \frac{1}{y}$

3.2

Describe how the graphs of $f(x)$ and $g(x)$ are related.

19. $f(x) = x^4$ and $g(x) = x^4 + 5$

20. $f(x) = |x|$ and $g(x) = |x + 2|$

