Algebra 2
Review Ch. 6
Quiz 6.3-6.4
MCT 6.1-6.4 tomorrow

Whiteboards

Given $f(x) = 2x^2 + 4x - 3$ and $g(x) = 5x - 2$, find each function. (Lesson 6-1)

1. $(f + g)(x)$
2. $(f - g)(x)$
3. $(f \cdot g)(x)$
4. $\left(\frac{f}{g}\right)(x)$
5. $[f \circ g](x)$
6. $[g \circ f](x)$

Determine whether each pair of functions are inverse functions. Write *yes* or *no*. (Lesson 6-2)

8. $f(x) = 2x + 16$

$g(x) = \frac{1}{2}x - 8$

9. $g(x) = 4x + 15$

$h(x) = \frac{1}{4}x - 15$

Find the inverse of each function, if it exists. (Lesson 6-2)

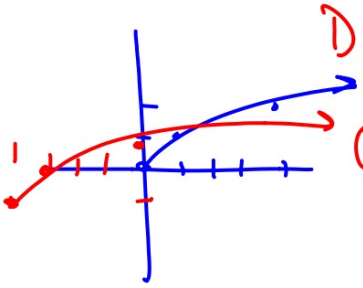
12. $h(x) = \frac{2}{5}x + 8$

13. $f(x) = \frac{4}{9}(x - 3)$

Graph each function. State the domain and range of each function. (Lesson 6-3)

21. $y = 2 + \sqrt{x}$

22. $y = \sqrt{x + 4} - 1$



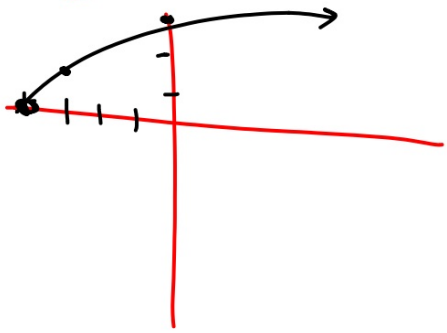
D: $x \geq -4$

R: $y \geq -1$

1.4

$y = \sqrt{2x + 8}$

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



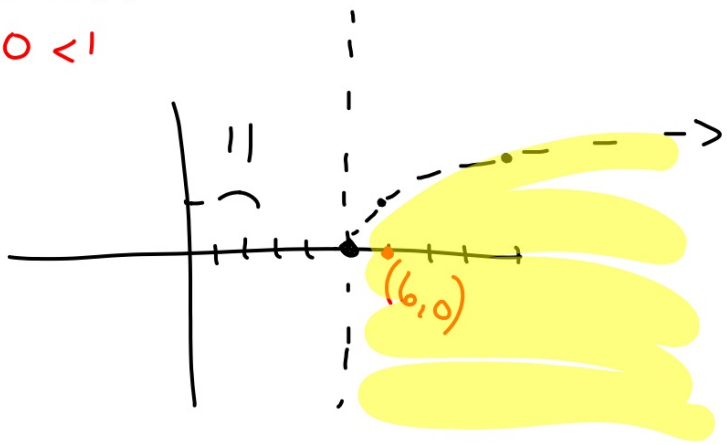
Graph each inequality. (Lesson 6-3)

17. $y < \sqrt{6 - 5}$

18. $y \leq -2\sqrt{x}$

$0 < \sqrt{1}$

$0 < 1$



Simplify. (Lesson 6-4)

24. $\pm\sqrt[2]{121a^{2}b^{18}}$

25. $\sqrt[2]{(x^4+3)^{12}}$

$\pm 11a^{2}b^{9}$

$(x^4+3)^{6}$

28. $\sqrt[3]{8(x+4)^{\frac{6}{3}}}$

$2^{\frac{3}{3}}$

2^2

$2(x+4)^2$

29. $\sqrt[4]{16(y+x)^{\frac{8}{4}}}$

$2^{\frac{4}{4}}$ 2^2

$2(y+x)^2$

$\sqrt{-16x^4}$

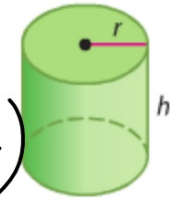
$4x^2i$

$\sqrt[3]{-27}$

$= -3$

psych…

30. MULTIPLE CHOICE The radius of the cylinder below is equal to the height of the cylinder. The radius r can be found using the formula $r = \sqrt[3]{\frac{V}{\pi}}$. Find the radius of the cylinder if the volume is 500 cubic inches. (Lesson 6-4)



$\sqrt[3]{159.2}$ ^ $\left(\frac{1}{3}\right)$

≈ 5.42in

$r = \sqrt[3]{\frac{V}{\pi}}$

$r = \sqrt[3]{159.2}$

A 4) $y = -2\sqrt{9+3x} + 2$

B 3) $y = -\sqrt{9+3x} + 2$

MCQ p414 odds