

Precalc Review Ch. 11

Quiz 11.3-11.4 is today

Ch. MCT 11.1-11.4 is tomorrow

whiteboards

REVIEW EXERCISES

Evaluate each expression.

11. $\left(\frac{1}{4}\right)^{-2}$

12. $64^{\frac{1}{2}}$

13. $27^{\frac{4}{3}}$

14. $(\sqrt[4]{256})^3$

$$\left(\sqrt[3]{27}\right)^4$$
$$3^4$$

$$(4)^3$$
$$64$$

~~Gem~~

Simplify each expression.

15. $3x^2(3x)^{-2}$

16. $(6a^{\frac{1}{3}})^3$

$$(3x^2z^{-4}) = \frac{3x}{z^4}$$

17. $\left(\frac{1}{2}x^4\right)^3$

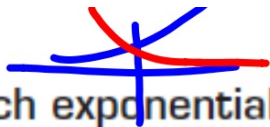
18. $(w^3)^4 \cdot (4w^2)^2$

19. $((2a)^{\frac{1}{3}}(a^2b)^{\frac{1}{3}})^3$

20. $(3x^{\frac{1}{2}}y^{\frac{1}{4}})(4x^2y^2) = 12x^{2\frac{1}{2}}y^{2\frac{1}{4}}$

$$\left(\left(2^{\frac{1}{3}}a^{\frac{1}{3}}b^{\frac{1}{3}}\right)\left(2^{\frac{1}{3}}a^{\frac{2}{3}}b^{\frac{1}{3}}\right)\right)^3$$

$$12x^{2\frac{1}{2}}y^{2\frac{1}{4}}$$



Graph each exponential function or inequality.

21. $y = 3^{-x}$

22. $y = \left(\frac{1}{2}\right)^x$

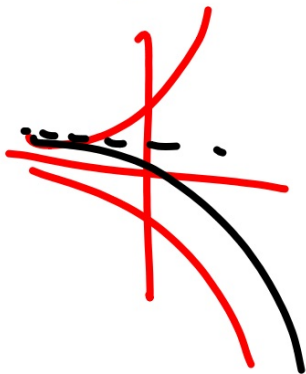
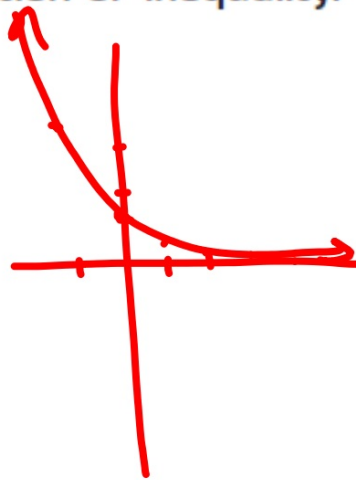
23. $y = 2^{x-1}$

24. $y = 2^x + 2$

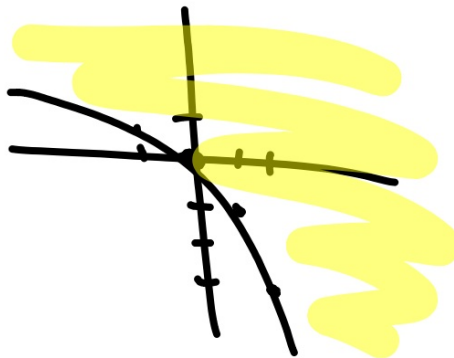
25. $y \geq -2^x + 1$

26. $y < 2^{x+2}$

x	y
0	1
1	1/3
2	1/9
-1	3



x	y
0	0
1	-1
2	-3
-1	1/2



$$A = Pe^{rt}$$

Find the balance for each account after 10 years if the interest is compounded continuously.

27. \$2500 invested at 6.5%

28. \$6000 invested at 7.25%

29. \$12,000 invested at 5.9%

REVIEW EXERCISES

Write each equation in exponential form.

30. $\log_8 4 = \frac{2}{3}$

31. $\log_3 \frac{1}{81} = -4$

$$8^{\frac{2}{3}} = 4$$

Write each equation in logarithmic form.

32. $2^4 = 16$

33. $5^{-2} = \frac{1}{25}$

$$\log_2 16 = 4$$

Evaluate each expression.

34. $\log_2 32$

35. $\log_{10} 0.001$

36. $\log_4 \frac{1}{16}$

37. $\log_2 0.5$

38. $\log_6 216$

39. $\log_9 \frac{1}{9}$

40. $\log_4 1024$

41. $\log_8 512$

Solve each equation.

42. $\log_x 81 = 4$

43. $\log_{\frac{1}{2}} x = -4$

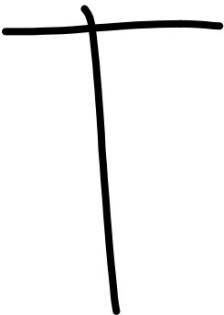
44. $\log_3 3 + \log_3 x = \log_3 45$

45. $2 \log_6 4 - \frac{1}{3} \log_6 8 = \log_6 x$

46. $\log_2 x = \frac{1}{3} \log_2 27$

47. Graph $y = \log_{10} x$

$x = 10^y$



$\frac{4^2}{2} = x$
 $8 = x$

