CHAPTER 7

NAME _____ DATE _____

Chapter Test C

For use after Chapter 7

Evaluate the expression without using a calculator.

1. $\sqrt[3]{-125}$ **2.** $27^{2/3}$ **3.** $\sqrt[4]{81}$ **4.** $\left(\frac{1}{216}\right)^{-1/3}$

Simplify the expression. Assume all variables are positive.

5. $(3^{1/2} \cdot 3^{1/3})$ **6.** $\sqrt[4]{32x^5y^4}$ **7.** $\left(\frac{27x^6}{8y^{12}}\right)^{2/3}$ **8.** $\sqrt[3]{54} + \sqrt[3]{2}$

Perform the indicated operation and state the domain. Let $f(x) = x - 1$ and $g(x) = x + 1$.

9. $f(x) + g(x)$ **10.** $f(x) - g(x)$ **11.** $f(x) \cdot g(x)$

12. $\frac{f(x)}{g(x)}$ **13.** $f(g(x))$

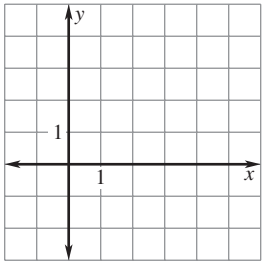
Find the inverse function.

14. $4x - 2y = 8$ **15.** $f(x) = x^2 + 5; x \geq 0$

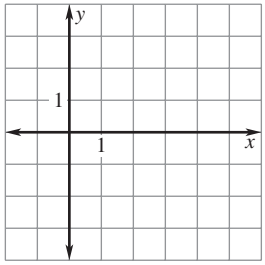
16. $f(x) = (x - 7)^{1/3}$

Graph the function. Then state the domain and range.

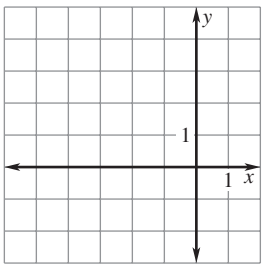
17. $f(x) = 4\left(\frac{1}{2}\right)^x$



18. $f(x) = x^{1/2} - 2$



19. $f(x) = \sqrt[3]{x + 2} + 1$



Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

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Review and Assess

NAME _____ DATE _____

Chapter Test C

For use after Chapter 7

Solve the equation. Check for extraneous solutions.

20. $4 - x = \sqrt{10 - 3x}$

21. $5 = -\sqrt{7y - 3}$

22. $2(x + 2)^{1/3} = 6$

Basketball In Exercises 23–26, use the tables below which give the points scored in each game played by the boys and girls basketball teams this season.

Boys Team
56, 81, 80, 75, 48, 65, 90, 66, 70, 70

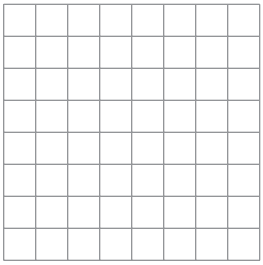
Girls Team
60, 72, 61, 58, 78, 65, 66, 55, 65, 73

23. Find the mean, median, mode, range, and standard deviation for each data set.

24. Interpret the data as to which team is more consistent in their scoring (use the standard deviation).

25. Draw a box-and-whisker plot of the *boys* points.

26. Make a frequency distribution of the *girls* points using five intervals beginning with 55–59. Then draw a histogram of this data.



20. _____

21. _____

22. _____

23. _____

24. _____

25. Use space at left.

26. Use space at left.