CHAPTER 7

NAME _____ DATE _____

Chapter Test A

For use after Chapter 7

Evaluate the expression without using a calculator.

1. $\sqrt[3]{-8}$ **2.** $25^{1/2}$ **3.** $27^{2/3}$ **4.** $8^{-1/3}$

Simplify the expression. Assume all variables are positive.

5. $\left(2^{1/3} \cdot 3^{1/3}\right)^3$ **6.** $\sqrt[3]{8x^3y^6z^3}$ **7.** $\dfrac{x^3y^3}{(xy)^{-3}}$ **8.** $\sqrt{50} + \sqrt{8}$

Perform the indicated operation and state the domain. Let $f(x) = 3x$ and $g(x) = x - 5$.

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

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

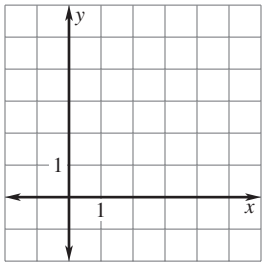
Find the inverse function.

14. $f(x) = x + 9$ **15.** $f(x) = \frac{1}{2}x + 2$

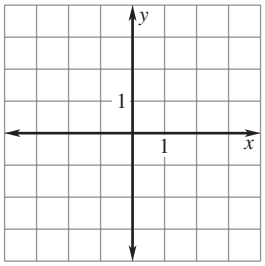
16. $f(x) = 3x + 6$

Graph the function. Then state the domain and range.

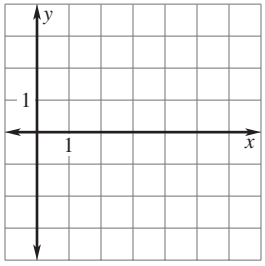
17. $f(x) = \sqrt{x}$



18. $f(x) = x^{1/3}$



19. $g(x) = \sqrt{x - 3}$



Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. Use grid at left. _____

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Review and Assess

NAME _____ DATE _____

Chapter Test A

For use after Chapter 7

Solve the equation. Check for extraneous solutions.

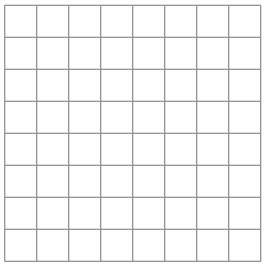
20. $x^{1/2} + 3 = 4$ **21.** $3\sqrt{2x + 4} = 12$ **22.** $\sqrt[3]{x^2 + 9} = 3$

Exam Scores In Exercises 23–25, suppose your exam scores on the ten exams taken in Algebra 2 are: 65, 75, 84, 72, 90, 92, 86, 95, 84, and 91.

23. Find the mean, median, mode, range, and standard deviation of the exam scores.

24. Draw a box-and-whisker plot of the exam scores.

25. Make a frequency distribution using four intervals beginning with 60–69. Then draw a histogram of the data set.



20. _____

21. _____

22. _____

23. _____

24. Use space at left.

25. Use space at left.