Algebra 1

Practice Chapter 10 Test

NAME_____

Write the letter for the best answer. (3 Points each)

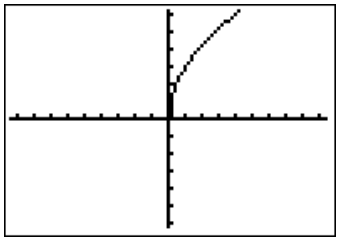
1. How does the graph of $y = \sqrt{x - 3}$ compare to the parent graph?

A. up 3 B. down 3 C. right 3 D. left 3

2. How does the graph of $y = \sqrt{x} + 4$ compare to the parent graph?

A. up 4 B. down 4 C. right 4 D. left 4

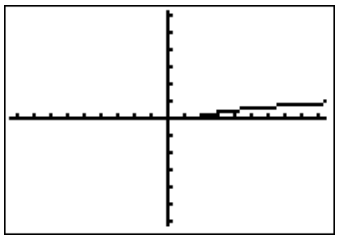
3. What equation corresponds to the graph shown?



A. $y = \sqrt{x} + 3$ B. $y = \sqrt{x + 3}$

C. $y = 3\sqrt{x}$ D. $y = \frac{1}{3}\sqrt{x}$

4. What equation corresponds to the graph shown?



A. $y = \frac{1}{3}\sqrt{x - 2}$ B. $y = 3\sqrt{x} - 2$

C. $y = 3\sqrt{x + 2}$ D. $y = \frac{1}{3}\sqrt{x} + 2$

5. Simplify $\sqrt{50}$

A. $25\sqrt{2}$ B. $10\sqrt{5}$

C. $5\sqrt{2}$ D. $2\sqrt{5}$

6. Simplify $\sqrt{24}$

A. $6\sqrt{2}$ B. $6\sqrt{4}$

C. $4\sqrt{6}$ D. $2\sqrt{6}$

7. Simplify $\sqrt{40}$

A. $2\sqrt{10}$ B. $5\sqrt{8}$

C. $10\sqrt{2}$ D. $4\sqrt{10}$

8. Simplify $\sqrt{48}$

A. $2\sqrt{12}$ B. $12\sqrt{2}$

C. $16\sqrt{3}$ D. $4\sqrt{3}$

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

Points(24)_____

9. Simplify $\sqrt{45x^3y^2}$

A. $3|xy|\sqrt{5x}$ B. $3x|y|\sqrt{5x}$

C. $3x^2|y|\sqrt{5x}$ D. $5|xy|\sqrt{3x}$

10. Simplify $\sqrt{20x^2y^4z^5}$

A. $2xy^2z^2\sqrt{5z}$ B. $2|xy^2|z^2\sqrt{5z}$

C. $2|x|y^2z^2\sqrt{5z}$ D. $2|xy^2z^2|\sqrt{5z}$

11. Simplify $\sqrt{90x^4y^5z^6}$

A. $3|x^2y^2z^3|\sqrt{10y}$ B. $3x^2y^2|z^3|\sqrt{10y}$

C. $3x^2y^2|z^3|\sqrt{10y}$ D. $3x^2|yz^3|\sqrt{10y^3}$

12. Simplify $\sqrt{\frac{7}{3}}$

A. $\frac{\sqrt{21}}{3}$ B. $\frac{3\sqrt{7}}{7}$

C. $\sqrt{3}$ D. $\frac{\sqrt{21}}{\sqrt{3}}$

13. Simplify $\frac{3}{5-\sqrt{2}}$

A. $\frac{15+3\sqrt{2}}{23}$ B. $\frac{15-3\sqrt{2}}{23}$

C. $15+3\sqrt{2}$ D. $\frac{15+3\sqrt{2}}{3}$

14. Simplify $7\sqrt{10}-2\sqrt{10}$

A. 50 B. $5\sqrt{10}$

C. $25\sqrt{2}$ D. $10\sqrt{5}$

15. Simplify $5\sqrt{8}+\sqrt{12}-2\sqrt{18}$

A. $4\sqrt{38}$ B. $5\sqrt{8}-2\sqrt{3}-6\sqrt{2}$

C. $4\sqrt{2}+2\sqrt{3}$ D. $2\sqrt{2}-2\sqrt{3}$

16. Simplify $\sqrt{3}\left(\sqrt{5}+4\sqrt{3}\right)$

A. $\sqrt{15}+36$ B. $12\sqrt{15}$

C. $\sqrt{27}$ D. $\sqrt{15}+12$

9._____

10._____

11._____

12._____

13._____

14._____

15._____

16._____

Points(24)_____

17. Solve $\sqrt{2x - 8} = 4$.

A. 8 **B.** 12
C. 10 **D.** 14

18. Solve $\sqrt{x - 5} = 7$.

A. 44 **B.** 16
C. 2 **D.** 54

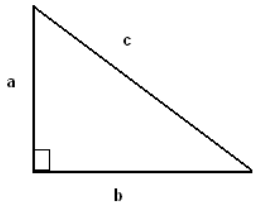
19. Solve $\sqrt{x - 6} + 3 = 5$.

A. 10 **B.** 21
C. 13 **D.** 25

20. Solve $2\sqrt{3x + 4} = 10$.

A. 7 **B.** 14
C. 10 **D.** 23

21. Find the length of the missing side if a = 4 and b = 5.



A. 2.7 **B.** 5.8
C. 6.4 **D.** 8.3

22. Find the length of the missing side if b = 5 and c = 11.

A. $4\sqrt{6}$ **B.** 6
C. $5\sqrt{3}$ **D.** 96

23. Determine which side measures form a right triangle.

A. 6,13,14 **B.** 7,14,15
C. 5,12,13 **D.** 8,15,16

24. Find the distance between the points (3, 5) and (4, 8).

A. $\sqrt{170}$ **B.** $\sqrt{54}$
C. $2\sqrt{10}$ **D.** $\sqrt{10}$

25. Find the distance between the points (5, -4) and (1, 2).

A. $3\sqrt{15}$ **B.** $4\sqrt{13}$
C. $9\sqrt{6}$ **D.** $2\sqrt{13}$

17._____

18._____

19._____

20._____

21._____

22._____

23._____

24._____

25._____

Points(27)_____

26. Find the coordinates of the midpoint of (11, -9) and (5, 13).

A. (6, 7) **B.** (3, -11)
C. (8, 2) **D.** (10, 2)

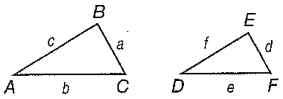
27. Find the coordinates of the midpoint of (8, -7) and (-6, -4).

A. (7, 1.5) **B.** (1, -5.5)
C. (-7, 6.5) **D.** (2, -6.5)

USE THE FIGURE TO ANSWER #28-31

28. If the two triangles are similar, and a = 9, c = 13 and d = 12, find f.

A. 7.3 **B.** 10.83 **C.** 12.5 **D.** 17.3



29. If the two triangles are similar, and a = 15, b = 8 and e = 12, find d.

A. 16.5 **B.** 8.5 **C.** 22.5 **D.** 18.5

30. If the two triangles are similar, and b = 14, c = 18 and f = 16, find e.

A. 22.4 **B.** 20.4 **C.** 11.4 **D.** 12.4

31. If a = 6, b = 18, c = 10, d = 12, e = 36, and f = 20, are the triangles similar?

A. Yes **B.** No **C.** Maybe **D.** Can't be determined

DRAW A PICTURE FOR #32-33.

32. LADDERS A 16 foot ladder leans against a wall. The base of the ladder is 6 feet from where the wall meets the ground. How far up the wall does the ladder reach?

A. 14.8 ft **B.** 12.9 ft **C.** 144 ft **D.** 220 ft

33. TREES An individual that is 5.5 ft casts a shadow of 3 feet. If a tree is casting a shadow of 10 feet, how tall is the tree?

A. 18.3 ft **B.** 1.6 ft **C.** 5.5 ft **D.** 21.6 ft

26._____

27._____

28._____

29._____

30._____

31._____

32._____

33._____

Points(24)_____