

5.4 Practice A

In Exercises 1–6, solve the equation. Check your solution.

1. $\sqrt{3x - 2} = 5$

2. $\sqrt{6x + 1} = 9$

3. $\sqrt[3]{x + 10} = 4$

4. $\sqrt[3]{x} - 8 = -2$

5. $-3\sqrt{16x} + 14 = -10$

6. $6\sqrt[3]{25x} - 16 = 14$

7. Biologists have discovered that the shoulder height h (in centimeters) of a male Asian elephant can be modeled by $h = 62.5\sqrt[3]{t} + 75.8$, where t is the age (in years) of the elephant. Determine the age of an elephant with a shoulder height of 300 centimeters.

In Exercises 8–13, solve the equation. Check your solution(s).

8. $x - 8 = \sqrt{4x}$

9. $\sqrt{2x - 14} = x - 7$

10. $\sqrt{x + 22} = x + 2$

11. $\sqrt[3]{8x^3 + 27} = 2x + 3$

12. $\sqrt[4]{2 - 9x^2} = 3x$

13. $\sqrt{3x - 5} = \sqrt{x + 9}$

In Exercises 14–16, solve the equation. Check your solution(s).

14. $2x^{2/3} = 18$

15. $x^{3/4} + 10 = 0$

16. $(x + 12)^{1/2} = x$