

Answers!

DIRECTIONS: Simplify. If there is not a real root, write “not real” in the blank.

1. $\sqrt{121}$

11

2. $\sqrt{-9}$

not real

3. $\sqrt[3]{343}$

7

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

-2

5. $-\sqrt{49}$

-7

6. $\frac{\sqrt{12}}{\sqrt{16}}$

 $\frac{\sqrt{3}}{2}$

7. $\frac{\sqrt{12}}{\sqrt{10}}$

 $\frac{\sqrt{30}}{5}$

8. $\sqrt{4b^6}$

 $2b^3$

9. $\sqrt[3]{27m^{12}}$

 $3m^4$

DIRECTIONS: Show work to solve each equation. Write the solutions in the provided blanks. If there are no real solutions, write "no solution" in the blank.

10. $3c^2 + 10 = 253$

11. $4d^3 - 6 = 26$

$c = \pm 9$

$d = 2$

DIRECTIONS: Simplify. Write your answers in the provided blanks. Work must be shown for #17-25.

12. $\sqrt{48}$

13. $\sqrt[3]{250}$

$4\sqrt{3}$

$5\sqrt[3]{2}$

14. $\sqrt{72}$

15. $\sqrt{100n^5}$

$6\sqrt{2}$

$10n^2\sqrt{n}$

16. $\sqrt{50m^{10}}$

17. $\sqrt{5} \cdot \sqrt{30}$

$5m^5\sqrt{2}$

$5\sqrt{6}$

18. $\sqrt[3]{-2y^2} \bullet \sqrt[3]{12y^2}$

$$-2y \sqrt[3]{3y}$$

19. $\sqrt{5}(\sqrt{10} - \sqrt{15})$

$$5\sqrt{2} - 5\sqrt{3}$$

20. $\frac{\sqrt{5}}{\sqrt{20}}$

$$\frac{1}{2}$$

21. $\frac{\sqrt{49}}{\sqrt{3}}$

$$\frac{7\sqrt{3}}{3}$$

22. $\frac{\sqrt[3]{6}}{\sqrt[3]{4x^2}}$

$$\frac{\sqrt[3]{12x}}{2x}$$

23. $4\sqrt{12} + 3\sqrt{48}$

$$20\sqrt{3}$$

24. $\sqrt[3]{3} - 3\sqrt[3]{54} + 5\sqrt[3]{81}$

$$16\sqrt[3]{3} - 9\sqrt[3]{2}$$

25. $3\sqrt{18} - \sqrt{72} + 5\sqrt{2}$

$$8\sqrt{2}$$