

Name: _____
Algebra I

Date: _____

Directions: Identify the a) index b) root and c) radicand of each.

1. $\sqrt{16}$

2. $\sqrt[3]{125}$

3. $-\sqrt{81}$

4. $\sqrt[3]{-27}$

5. $\sqrt[3]{64}$

6. $\sqrt[5]{32}$

Directions: Simplify

7. $-\sqrt{9}$

8. $\pm\sqrt{121}$

9. $-\sqrt{144}$

10. $\sqrt{-64}$

11. $\sqrt{625}$

12. $\sqrt{49}$

13. $\sqrt{400}$

14. $\sqrt{-81}$

15. $\pm\sqrt{225}$

16. $\sqrt{x^2}$

17. $\sqrt{x^8}$

18. $\sqrt{x^{16}}$

19. $\sqrt{x^2y^4}$

20. $\sqrt{x^6y^{12}}$

21. $(\sqrt{113})^2$

22. $(\sqrt{74})^2$

23. $(\sqrt[3]{12})^3$

24. $(\sqrt[4]{31})^4$

25. $\sqrt{\frac{81}{121}}$

26. $\sqrt{\frac{144}{196}}$

27. $\sqrt{\frac{9}{625}}$

Directions: State whether the radical is rational or irrational.

28. $\sqrt{169}$

29. $\sqrt{500}$

30. $\sqrt{296}$

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

32. $\sqrt{-36}$

33. $\sqrt{50}$