

Lesson 6 Homework Practice

Square Roots and Cube Roots

Find each square root.

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|------------------|------------------|-------------------|
| 1. $\sqrt{100}$ | 2. $\sqrt{144}$ | 3. $\sqrt{-36}$ |
| 4. $\sqrt{121}$ | 5. $\sqrt{-148}$ | 6. $-\sqrt{4}$ |
| 7. $-\sqrt{9}$ | 8. $-\sqrt{49}$ | 9. $\sqrt{256}$ |
| 10. $\sqrt{529}$ | 11. $\sqrt{361}$ | 12. $-\sqrt{196}$ |

Then estimate each square root to the nearest integer.

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|------------------|------------------|-------------------|
| 13. $-\sqrt{2}$ | 14. $\sqrt{38}$ | 15. $\sqrt{249}$ |
| 16. $\sqrt{131}$ | 17. $\sqrt{7}$ | 18. $\sqrt{52}$ |
| 19. $\sqrt{168}$ | 20. $\sqrt{499}$ | 21. $-\sqrt{217}$ |

Find each cube root.

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|-----------------------|-----------------------|----------------------|
| 22. $\sqrt[3]{-125}$ | 23. $\sqrt[3]{343}$ | 24. $\sqrt[3]{8}$ |
| 25. $\sqrt[3]{3375}$ | 26. $\sqrt[3]{729}$ | 27. $\sqrt[3]{-1}$ |
| 28. $\sqrt[3]{-8000}$ | 29. $\sqrt[3]{512}$ | 30. $\sqrt[3]{-729}$ |
| 31. $\sqrt[3]{1331}$ | 32. $\sqrt[3]{-2744}$ | 33. $\sqrt[3]{64}$ |

Estimate each cube root to the nearest integer.

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|----------------------|-----------------------|-----------------------|
| 34. $\sqrt[3]{647}$ | 35. $\sqrt[3]{325}$ | 36. $\sqrt[3]{-805}$ |
| 37. $\sqrt[3]{1603}$ | 38. $\sqrt[3]{-3858}$ | 39. $\sqrt[3]{-4551}$ |
| 40. $\sqrt[3]{181}$ | 41. $\sqrt[3]{-1006}$ | 42. $\sqrt[3]{7852}$ |

43. A square tarpaulin covering a softball field has an area of 441 m^2 . What is the length of one side of the tarpaulin?
44. The volume of a cube is 2744 m^3 . What is the length of an edge of the cube?
45. The highest observation deck on the Eiffel Tower in Paris is about 899 feet above the ground. About how far could a visitor see on a clear day? Use the equation $d = 1.22 \cdot \sqrt{h}$ where d is the distance to the horizon in miles and h is the person's distance from the ground in feet.