



Exponent Problem Set 3

Consider the following problems to live in the Real number system \mathbb{R} . Simplify and show all steps.

1. $64^{\frac{1}{3}} =$

2. $64^{\frac{1}{6}} =$

3. $64^{\frac{1}{2}} =$

4. $-64^{\frac{1}{3}} =$

5. $-64^{\frac{1}{6}} =$

6. $-64^{\frac{1}{2}} =$

7. $(-64)^{\frac{1}{3}} =$

8. $(-64)^{\frac{1}{6}} =$

9. $(-64)^{\frac{1}{2}} =$

10. Explain how problems 4, 5, and 6 are different from problems 7, 8, and 9.



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11. $8^{\frac{1}{3}} =$

12. $(16)^{\frac{1}{4}} =$

13. $27^{\frac{1}{3}} =$

14. $(64)^{\frac{1}{4}} =$

15. $81^{\frac{1}{4}} =$

16. $-4^{\frac{1}{2}} =$

17. $-49^{\frac{1}{2}} =$

18. $216^{\frac{1}{3}} =$

19. $128^{\frac{1}{7}} =$

20. $121^{\frac{1}{2}} =$



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21. $45^{\frac{1}{2}} =$

22. $81^{\frac{1}{3}} =$

23. $(-27)^{\frac{1}{3}} =$

24. $5000^{\frac{1}{3}} =$

25. $32^{\frac{1}{4}} =$

26. $72^{\frac{1}{2}} =$

27. $32^{\frac{1}{4}} =$

28. $20^{\frac{1}{2}} =$

29. $24^{\frac{1}{3}} =$

30. $28^{\frac{1}{2}} =$