

I. Rewrite each expression using only positive exponents.

1. $x^{-8}$	2. $3x^{-8}$	3. $-3x^{-8}$
4. $x^{-1/2}$	5. $\frac{5}{x^{-3}}$	6. $\frac{-4}{x^{-3/2}}$

II. Rewrite each of the following as an equivalent expression using radical notation.

7. $x^{1/2}$	8. $x^{-1/2}$	9. $x^{2/3}$
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III. Evaluate each of the following without using a calculator. Your answer should be a fraction or an integer, not a decimal number. If the expression does not represent a real number, state this.

10. $5^{-2}$	11. $-5^2$	12. $(-5)^2$
13. $36^{1/2}$	14. $36^{-1/2}$	15. $4^{3/2}$
16. $4^{-3/2}$	17. $-4^{3/2}$	18. $8^{5/3}$

III. Rewrite each radical using rational exponents.

19. $\sqrt{x^3}$	20. $\frac{1}{\sqrt{x}}$	21. $\sqrt[3]{x^4}$
22. $\sqrt{x^2+4}$	23. $\frac{5}{\sqrt[3]{x^2}}$	24. $\frac{-5}{\sqrt[3]{x^2}}$

**Please turn over for answers.**