Algebra 2 Simplifying Radical Expressions
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HW #24: SHOW ALL WORK on the worksheet

Simplify.

1) $125^{\frac{2}{3}}$

2) $16^{\frac{3}{2}}$

3) $(9r^4)^{\frac{3}{2}}$

4) $(343k^3)^{-\frac{2}{3}}$

Write each expression in exponential form.

5) $\left(\sqrt{3x}\right)^3$

6) $\dfrac{1}{\left(\sqrt{n}\right)^3}$

Write each expression in radical form.

7) $(4a)^{-\frac{2}{3}}$

8) $(6n)^{\frac{5}{3}}$

Simplify.

9) $\sqrt{18a^2b}$

10) $\sqrt{16x^2}$

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11) $\sqrt[4]{48h^4j^3k^5}$

12) $\sqrt[3]{256xy^2z^3}$

13) $-3\sqrt[3]{128ab^3}$

14) $3\sqrt[3]{256m^5n^2}$

15) $-4\sqrt[3]{16xy^3}$

16) $2\sqrt[3]{250a^4b^5}$

17) $-\sqrt{5} - 3\sqrt{8} - 2\sqrt{45}$

18) $-3\sqrt[3]{81} - \sqrt[3]{3} + 2\sqrt[3]{3}$

19) $5\sqrt[3]{64x^7} - x\sqrt[3]{8x^4}$

20) $\sqrt[3]{6x^3y^7} \cdot \sqrt[3]{4x^5}$

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