

Name : _____

Score : _____

Teacher : _____

Date : _____

Simplifying Rational Exponents

Simplify. For the answers: only positive exponents with no fractional exponents in the denominator.

1) $(g^3)^{\frac{1}{2}}$

6) $81z^3 \cdot 2z^{\frac{3}{4}} \cdot z^{-8}$

2) $(d^{-3} \cdot d \cdot n^{\frac{2}{3}})^8$

7) $(196b^3)^{0.5}$

3) $(x^{\frac{1}{2}})^{-2}$

8) $(243c^3)^{\frac{3}{5}}$

4) $216z^{\frac{1}{3}} \cdot z^{\frac{3}{4}}$

9) $(s^{\frac{1}{3}})^{\frac{5}{2}}$

5) $(s^{\frac{2}{3}})^2$

10) $(s^{\frac{1}{3}})^{-2}$



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Simplify. For the answers: only positive exponents with no fractional exponents in the denominator.

1) $(g^3)^{\frac{1}{2}}$

$$g^{\frac{3}{2}}$$

6) $81z^3 \cdot 2z^{\frac{3}{4}} \cdot z^{-8}$

$$\frac{162}{z^{\frac{17}{4}}}$$

2) $(d^{-3} \cdot d \cdot n^{\frac{2}{3}})^8$

$$d^{-16} n^{\frac{16}{3}}$$

7) $(196b^3)^{0.5}$

$$14b^{\frac{3}{2}}$$

3) $(x^{\frac{1}{2}})^{-2}$

$$\frac{1}{x^1}$$

8) $(243c^3)^{\frac{3}{5}}$

$$27c^{\frac{9}{5}}$$

4) $216z^{\frac{1}{3}} \cdot z^{\frac{3}{4}}$

$$216z^{\frac{13}{12}}$$

9) $(s^{\frac{1}{3}})^{\frac{5}{2}}$

$$s^{\frac{5}{6}}$$

5) $(s^{\frac{2}{3}})^2$

$$s^{\frac{4}{3}}$$

10) $(s^{\frac{1}{3}})^{-2}$

$$\frac{1}{s^{\frac{2}{3}}}$$

