

Name: _____

Date: _____

Radicals and Rational Exponents

Write in radical notation

1 $6^{\frac{1}{2}}$

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

3 $1^{\frac{1}{5}}$

4 $x^{\frac{3}{6}}$

5 $g^{\frac{4}{3}}$

6 $1000^{\frac{1}{3}}$

Write in rational exponents

7 $\sqrt[3]{y^6}$

8 $\sqrt[5]{6}$

9 $\sqrt{g^3}$

10 $\sqrt{20}$

11 $\sqrt[4]{f^2}$

12 $\sqrt[3]{e^4}$

Simplify

13 $5\sqrt[3]{81}$

14 $\frac{\sqrt{80}}{\sqrt{5}}$

15 $\sqrt[3]{-5} \cdot \sqrt[3]{-25}$

16 $\sqrt[4]{24} \cdot \sqrt[4]{14}$

17 $\sqrt{\frac{27}{16}}$

18 $\frac{\sqrt{500}}{\sqrt{5}}$

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Radicals and Rational Exponents

Write in radical notation

1 $6^{\frac{1}{2}}$

$\sqrt{6}$

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

$\sqrt[3]{y^2}$

3 $1^{\frac{1}{5}}$

$\sqrt[5]{1}$

4 $x^{\frac{3}{6}}$

$\sqrt[6]{x^3}$

5 $g^{\frac{4}{3}}$

$\sqrt[3]{g^4}$

6 $1000^{\frac{1}{3}}$

$\sqrt[3]{1000}$

Write in rational exponents

7 $\sqrt[3]{y^6}$

y^2

8 $\sqrt[5]{6}$

$6^{\frac{1}{5}}$

9 $\sqrt{g^3}$

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

10 $\sqrt{20}$

$20^{\frac{1}{2}}$

11 $\sqrt[4]{f^2}$

$f^{\frac{1}{2}}$

12 $\sqrt[3]{e^4}$

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

Simplify

13 $5\sqrt[3]{81}$

$15\sqrt[3]{3}$

14 $\frac{\sqrt{80}}{\sqrt{5}}$

17 $\sqrt{\frac{27}{16}}$

15 $\sqrt[3]{-5} \cdot \sqrt[3]{-25}$

18 $\frac{\sqrt{500}}{\sqrt{5}}$

16 $\sqrt[4]{24} \cdot \sqrt[4]{14}$

$2\sqrt[4]{21}$

$\frac{\sqrt[3]{3}}{4}$

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