

Name: _____

Date: _____ Score: _____

Simplifying Expressions

————Rational Exponents————

1 $x^{\frac{3}{5}} \cdot x^{\frac{7}{5}}$

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

3 $(x^{\frac{2}{3}})^{\frac{2}{7}}$

4 $(-32y^{10})^{\frac{1}{5}}$

5 $(x^{\frac{1}{3}})^6 \cdot \sqrt[4]{y^4}$

6 $[(x^2y^{\frac{1}{2}})^4] \cdot [\sqrt[3]{y^3}]$

7 $\sqrt{(x^4y^2)}$

8 $\frac{(xy^{\frac{1}{2}})^2}{\sqrt[5]{x^5}}$

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Simplifying Expressions

———— Rational Exponents ————

Answers

1 $x^{\frac{3}{5}} \cdot x^{\frac{7}{5}}$

x^2

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

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

3 $(x^{\frac{2}{3}})^{\frac{2}{7}}$

$x^{\frac{4}{21}}$

4 $(-32y^{10})^{\frac{1}{5}}$

$-2y^2$

5 $(x^{\frac{1}{3}})^6 \cdot \sqrt[4]{y^4}$

x^2y

6 $[(x^2y^{\frac{1}{2}})^4] \cdot [\sqrt[3]{y^3}]$

x^8y^3

7 $\sqrt{(x^4y^2)}$

x^2y

8 $\frac{(xy^{\frac{1}{2}})^2}{\sqrt[5]{x^5}}$

xy