

Name: _____

Review for Mini-Quiz

Simplifying Rational Expressions

PERFORM the INDICATED OPERATION. SIMPLIFY the result completely.

1. $\frac{x^2 - x - 20}{x + 4} \cdot \frac{x - 3}{x^2 - 2x - 15}$

2. $\frac{7x^2 - 14x}{x^3} \div \frac{5x - 10}{x^5}$

3. $\frac{p + 1}{p^2 - 49} + \frac{p - 1}{p^2 + 10p + 21}$

4. $\frac{2n + 7}{n - 1} - \frac{8n}{n + 5}$

CHALLENGE:

$$\frac{\frac{4}{x} - 4}{2 + \frac{1}{x}}$$

PRACTICE WORKSHEET: Simplifying Radicals

Simplify each expression. Be sure to rationalize when necessary and simplify completely.

$13\sqrt{2} + 4\sqrt{18}$	$2\sqrt{12} - 3\sqrt{27}$	$(8 - \sqrt{7})(1 + \sqrt{7})$
$\frac{1}{\sqrt{2}}$	$\sqrt{3}(7 - \sqrt{15})$	$\frac{10\sqrt{2}}{\sqrt{5}}$
$\sqrt{448}$	$\frac{6}{2 + \sqrt{3}}$	$\sqrt[3]{54} - \sqrt[3]{16}$
$\frac{2}{\sqrt[3]{9}}$	$\frac{5}{\sqrt{12}}$	$\sqrt[3]{16} \cdot 2\sqrt[3]{4}$
$\sqrt[3]{4} \cdot \sqrt[3]{10}$	$\sqrt[3]{27x^3y^2}$	$\sqrt[3]{27x^6y^4}$
$\sqrt{54x^5y^6z^2}$	$7\sqrt{6} - 2\sqrt{12} + \sqrt{24}$	$\frac{4}{\sqrt{5} - 6}$

Simplifying Nth Roots Partner Activity

One partner should simplify expressions in Column A, while the other simplifies Column B. Your answers should be the same.

A	B
$3\sqrt[5]{32} + \sqrt[3]{-1}$	$2\sqrt[3]{-8} + 3\sqrt[4]{81}$
$4\sqrt[3]{81} - \sqrt[3]{24}$	$\sqrt[3]{3000}$
$\sqrt[4]{162}$	$2\sqrt[4]{32} - \sqrt[4]{2}$
$2\sqrt[3]{4} \cdot \sqrt[3]{54}$	$\sqrt[3]{3} \cdot 2\sqrt[3]{72}$
$2\sqrt{6} \cdot 4\sqrt{2}$	$2\sqrt{27} + 5\sqrt{12}$
$2\sqrt[3]{54} + \sqrt[3]{128}$	$\sqrt[3]{50} \cdot \sqrt[3]{40}$