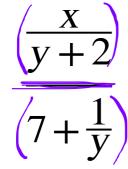
7.7 Simplifying Complex Fractions DAY ONE

A rational expression whose numerator, denominator, or both contain one or more rational expressions is called a <u>complex rational expression</u> or a <u>complex fractions</u>.



Our goal in this section is to simplify complex fractions like the one on the left. A complex fraction is simplified when it is in the form P divided by Q, where P and Q are polynomials that have no common factors.

OBJECTIVE 1: Simplifying Complex Fractions: METHOD ONE

Simplifying a Complex Fraction: Method I

Step 1. Simplify the numerator and the denominator of the complex fraction so that each is a single fraction.

Step 2. Perform the indicated division by multiplying the numerator of the complex fraction by the reciprocal of the denominator of the complex fraction.

Step 3. Simplify if possible.

Example 1: Simply each complex fraction.

a)
$$\frac{\frac{2x}{27y^2}}{\frac{6x^2}{9}} \frac{\frac{2x}{27y^2}}{\frac{27}{9}x^2} \cdot \frac{\frac{2x}{9}}{\frac{1}{9}x^2}$$

b)
$$\frac{5x}{x+2}$$
 $\frac{x}{x+2}$ $\frac{x}{x+2}$ $\frac{x}{x+2}$ $\frac{x}{x+2}$ $\frac{x}{2}$ $\frac{x}{x+2}$





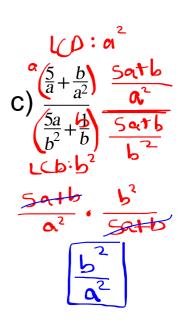
Practice 1:

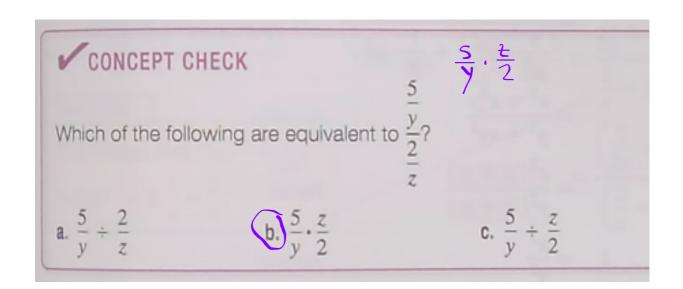
a)
$$\frac{5k}{36m}$$
 $\frac{15k}{9}$
 $\frac{5k}{9}$
 $\frac{5k}{9}$

b)
$$\frac{\frac{8x}{x-4}}{\frac{3}{x+4}}$$

$$\frac{8x}{x-4} \cdot \frac{x+4}{3}$$

$$8x(x+4)$$





7.7 DAY ONE HW: pg. 504

1 - 33 (o), 51, 53, 55