Objective: Simplify complex rational expressions

Lesson 8-1

fy.

$$\frac{\frac{10}{7}}{2-\frac{7}{2}} = \frac{\frac{10}{7}}{\frac{4-7}{2}} = \frac{\frac{10}{7}}{-\frac{3}{2}} = \frac{(10)(2)}{(7)(-3)} = -\frac{20}{21}$$

fy.

$$\frac{\frac{2}{3}-\frac{3}{5}}{\frac{3}{2}-\frac{1}{6}} = \frac{\frac{10-9}{15}}{\frac{18-2}{12}} = \frac{\frac{1}{15}}{\frac{16}{12}} = \frac{\frac{1}{15}}{\frac{4}{3}} = \frac{3}{60} = \frac{1}{20}$$

$$\frac{\frac{5}{3x-21}}{\frac{35x}{2x-14}} = \frac{(5)(2x-14)}{(3x-21)(35x)} = \frac{(5)(2)(x-7)}{(3)(x-7)(5)(7)x}$$

$$= \frac{2}{21x}$$

mplify.

$$\frac{\frac{u-7}{3}}{\frac{u^2-14u+49}{u-3}} = \frac{(u-7)(u-3)}{3(u^2-14u+49)}$$

$$= \frac{(u-7)(u-3)}{3(u-7)(u-7)}$$

$$= \frac{u-3}{3(u-7)}$$