

# Fractions and Rational Expressions Worksheet

Math Tutorial Lab Special Topic\*

## Example Problems

Simplify to lowest terms.

1.  $\frac{48}{120}$

2.  $\frac{110}{33}$

3.  $\frac{72}{48}$

4.  $\frac{49}{35}$

5.  $\frac{24x}{48x+132}$

6.  $\frac{-20x^3}{35x^3+5x^2}$

7.  $\frac{4x^2+17x-15}{4x-3}$

8.  $\frac{x^2+9x}{x^2+2x-63}$

Perform the indicated operation.

9.  $\frac{2}{4} + \frac{1}{6}$

10.  $\frac{9}{3} - \frac{8}{5}$

11.  $\frac{8}{9} \cdot \frac{8}{9}$

12.  $\frac{6}{49} \cdot \frac{21}{4}$

13.  $\frac{7}{4} \div \frac{9}{5}$

14.  $\frac{\frac{3}{5}}{\frac{6}{7}}$

15.  $1 - \frac{-7x+10}{x-8}$

16.  $\frac{2x-7}{x-8} - \frac{3x}{x+10}$

17.  $\frac{x+7}{x-5} + \frac{2}{x^2-10x+25}$

18.  $\frac{3}{x+1} + \frac{5}{x-9} - \frac{5x}{x^2-8x-9}$

19.  $\frac{-9x+18}{3x^2-21x} \cdot \frac{x^2-5x-14}{-4x-8}$

20.  $\frac{x-6}{x+9} \cdot \frac{-6x-42}{x^2+x-42}$

21.  $\frac{x^2+5x+4}{-4x-16} \div \frac{-9x-9}{9x-81}$

22.  $\frac{\frac{x^2-16x+63}{10x+70}}{\frac{x^2-9x}{-4x-28}}$

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\*Created by Maria Gommel, July 2014

## Answers

1.  $\frac{2}{5}$

2.  $\frac{10}{3}$

3.  $\frac{3}{2}$

4.  $\frac{7}{5}$

5.  $\frac{2x}{4x+11}$

6.  $\frac{-4x}{7x+1}$

7.  $x + 5$

8.  $\frac{x}{x-7}$

9.  $\frac{2}{3}$

10.  $\frac{7}{5}$

11.  $\frac{64}{81}$

12.  $\frac{9}{14}$

13.  $\frac{35}{36}$

14.  $\frac{7}{10}$

15.  $\frac{8x-18}{x-8}$

16.  $\frac{-x^2+37x-70}{x^2+2x-80}$

17.  $\frac{x^2+2x-33}{x^2-10x+25}$

18.  $\frac{3x-22}{x^2-8x-9}$

19.  $\frac{3(x-2)}{4x}$

20.  $\frac{-6}{x+9}$

21.  $\frac{x-9}{4}$

22.  $\frac{-2(x-7)}{5x}$