

AA PREP—INTRODUCTION TO RATIONALS—WORKSHEET #1

1. Simplify each rational expression.

a) $\frac{x^2}{x^2}$	b) $\frac{6 \cdot 7 \cdot 8 \cdot 9}{5 \cdot 6 \cdot 7 \cdot 8}$
c) $\frac{x+5}{5+x}$	d) $\frac{4-x}{x-4}$
e) $\frac{5x+10}{20}$	f) $\frac{x^2-2x-24}{x^2-16}$

2. Perform each operation (multiplication or division). Simplify.

a) $\frac{20}{21} \cdot \frac{49}{100}$	b) $\frac{24}{35} \div \frac{60}{63}$
c) $\frac{x+5}{9-x} \cdot \frac{x-9}{5+x}$	d) $\frac{x^2-2x-15}{x^2-25} \div \frac{x^2-9}{x^2+6x+9}$

3. Perform each operation (addition or subtraction). Simplify.

a) $\frac{5}{11} - \frac{3}{11}$	b) $\frac{1}{8} + \frac{5}{6}$
c) $\frac{7}{x+12} - \frac{4}{x+12}$	d) $\frac{2x}{x^2-x-20} + \frac{4}{x-5}$