

# 11-4

## Worksheet 1

### Worksheet 1

Find the LCD for the following denominators.

*Example:*  $2x$  and  $3x^2$  LCD is  $6x^2$

1. 2, 3

2. 4, 6

3. 3, 6

4. 5, 6

5. 3, 4

6.  $2x, 3x$

7.  $x + 1, x - 1$

8.  $x^2 + 2x + 1, x + 1$

9.  $x^2 + 3x + 2, x + 2$

10.  $3x - 2, x + 1$

Rename each rational expression so the denominators are alike.

*Example:*  $\frac{6}{x^2}, \frac{5}{2x}$  becomes  $\frac{12}{2x^2}$  and  $\frac{5x}{2x^2}$

11.  $\frac{1}{2}, \frac{3}{4}$

12.  $\frac{2}{3}, \frac{3}{5}$

13.  $\frac{1}{x}, \frac{2}{3x}$

14.  $\frac{x}{x+1}, \frac{2}{x-2}$

15.  $\frac{3}{2x+2}, \frac{x}{x+1}$

16.  $\frac{2}{a^2b}, \frac{3}{ab^2}$

17.  $\frac{1}{x^2-9}, \frac{2}{x+2}$

## Worksheet 2

Find the least common denominator for the following pairs of rational expressions.

*Example:*  $\frac{1}{2x}$  and  $\frac{2}{3x^2}$  LCD is  $6x^2$

1.  $\frac{1}{3xy}$  and  $\frac{2}{3x}$

2.  $\frac{1}{x+1}$  and  $\frac{2}{x-1}$

3.  $\frac{1}{x^2-x+6}$  and  $\frac{2}{x^2-3x}$

4.  $\frac{x}{2-x}$  and  $\frac{3}{x^2-x-2}$

5.  $\frac{2x}{x^2+2x+1}$  and  $\frac{y}{x^2-1}$

Rename these rational expression pairs so they have a least common denominator.

*Example:*  $\frac{1}{2x}$  and  $\frac{2}{3x^2}$  becomes  $\frac{3x}{6x^2}$  and  $\frac{4}{6x^2}$

6.  $\frac{1}{3xy}$  and  $\frac{2}{3x}$

7.  $\frac{1}{x+1}$  and  $\frac{2}{x-1}$

8.  $\frac{1}{x^2-x-6}$  and  $\frac{2}{x^2-3x}$

9.  $\frac{x}{2-x}$  and  $\frac{3}{x^2-x-2}$

10.  $\frac{2x}{x^2+2x+1}$  and  $\frac{y}{x^2-1}$