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CC ALGEBRA 2

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Do Now: Find the Least Common Multiple of the following

- a) 5, 2 5: 10, 15 2: 4, 6, 8, 10 LCM = 10
- b) 4, 8 4: 8, 12, 16 LCM = 8
- c) 3, 4 3: 6, 9, 12, 15 4: 8, 12 LCM = 12

LESSON #7: FINDING LEAST COMMON DENOMINATORS

Find the Least Common Denominator (LCD) of the following:

1. $\frac{3}{5a}, \frac{4}{2b} = \text{LCD} = 10ab$

2. $\frac{1}{n}, \frac{1}{n+1}, \frac{1}{n+2}$

$\text{LCD} = (n)(n+1)(n+2)$

3. $\frac{1}{n}, \frac{1}{n+1} \quad \text{LCD} = n(n+1)$

4. $\frac{6}{y+3}, \frac{7}{y-3} \quad (y+3)(y-3)$

Factor 1st!

5. $\frac{x}{x^2-16}, \frac{4}{x-4} \quad \text{LCD} = (x+4)(x-4)$
 $(x+4)(x-4)$

6. $\frac{x^2}{x-7}, \frac{49}{7-x} \quad \text{LCD} = -1$
OR
 $(x-7)(7-x)$

7. $\frac{-2}{x^2+5x+6}, \frac{2}{x+2} \quad \text{LCD} = (x+3)(x+2)$
 $(x+3)(x+2)$

8. $\frac{3}{x^2-x}, \frac{5}{x}, \frac{2x+2}{2x^2-2}$
 $x(x-1) \quad x \quad 2(x-1)$
 $2x(x-1)$

Partner Practice: Find the LCD.

9. $\frac{m}{sd}, \frac{s}{dm}, \frac{d}{ms}$ LCD = msd

10. $\frac{x}{x-2}, \frac{x}{x-4}$ LCD = $(x-2)(x-4)$

11. $\frac{1}{x}, \frac{x}{x-6}$ LCD = $x(x-6)$

12. $\frac{1}{x^2-x-12}, \frac{x-2}{x-4}$ LCD = $(x-4)(x+3)$
 $(x-4)(x+3)$

13. $\frac{1}{x^3+5x^2-x-5}, \frac{2}{x^2-1}$
 $x^2(x+5) \mid -(x+5) \quad \underline{(x+1)(x-1)}$
 $(x^2-1)(x+5)$
 $\underline{(x+1)(x-1)(x+5)}$

14. $\frac{x^2}{-1(2-x)}, \frac{4}{x-2}$ LCD = -1
 $-2+x$ LCD = $(x-2)(2-x)$
or
 $x-2$

LCD = $(x+1)(x-1)(x+5)$