

Name Key

Date \_\_\_\_\_ Pd \_\_\_\_\_

**7.3 Finding an LCD DAY TWO CYU**

- Use when you get it right all by yourself
- S** Use when you did it all by yourself, but made a silly mistake
- H** Use when you could do it alone with a little help from teacher or peer
- G** Use when you completed the problem in a group
- X** Use when a question was attempted but wrong (get help)
- N** Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Finding an LCD	1, 2	3 - 10	11 - 20
Restricting the domain in interval notation	1, 2	3 - 10	11 - 20

Find the LCD for each list of rational expressions. Then state your domain restriction of your LCD in interval notation.

1.  $\frac{19}{2x} & \frac{5}{4x^3}$

$4x^3$  D:  $(-\infty, 0) \cup (0, \infty)$

2.  $\frac{17x}{4y^5} & \frac{2}{8y}$

$8y^5$  D:  $(-\infty, 0) \cup (0, \infty)$

3.  $\frac{9}{8x} & \frac{3}{2x+4}$

$8x(2x)$   
D:  $(-\infty, -2) \cup (-2, 0) \cup (0, \infty)$

4.  $\frac{1}{6y} & \frac{3x}{4y+12}$

$12y(y+3)$  D:  $(-\infty, -3) \cup (-3, 0) \cup (0, \infty)$

5.  $\frac{2}{x+3} & \frac{5}{x-2}$

$(x+3)(x-2)$   
D:  $(-\infty, -3) \cup (-3, 2) \cup (2, \infty)$

6.  $\frac{-6}{x-1} & \frac{4}{x+5}$

$(x-1)(x+5)$   
D:  $(-\infty, -5) \cup (-5, 1) \cup (1, \infty)$

7.  $\frac{x}{x+6} & \frac{10}{3x+18}$

$3(x+6)$   
D:  $(-\infty, -6) \cup (-6, \infty)$

8.  $\frac{12}{x+5} & \frac{x}{4x+20}$

$4(x+5)$  D:  $(-\infty, -5) \cup (-5, \infty)$

9.  $\frac{8x^2}{(x-6)^2} & \frac{13x}{5x-30}$

$5(x-6)(x-6)$   
D:  $(-\infty, 6) \cup (6, \infty)$

10.  $\frac{9x^2}{7x-14} & \frac{6x}{(x-2)^2}$

$7(x-2)(x-2)$   
D:  $(-\infty, 2) \cup (2, \infty)$



$$11. \frac{1}{3x+3} \& \frac{7}{2x^2+4x+2}$$

$$6(x+1)(x+1)$$

$$D: (-\infty, -1) \cup (-1, \infty)$$

$$12. \frac{19x+5}{4x-12} \& \frac{3}{2x^2-12x+18}$$

$$4(x-3)(x-3)$$

$$D: (-\infty, 3) \cup (3, \infty)$$

$$13. \frac{5}{x-8} \& \frac{3}{8-x}$$

$$x-8$$

$$D: (-\infty, 8) \cup (8, \infty)$$

$$14. \frac{5x+1}{x^2+3x-4} \& \frac{3x}{x^2+2x-3}$$

$$(x-1)(x+4)(x+3)$$

$$D: (-\infty, -4) \cup (-4, -3) \cup (-3, 1) \cup (1, \infty)$$

$$15. \frac{4}{x^2+4x+3} \& \frac{4x-2}{x^2+10x+21}$$

$$(x+3)(x+1)(x+7)$$

$$D: (-\infty, -7) \cup (-7, -3) \cup (-3, -1) \cup (-1, \infty)$$

$$16. \frac{2x}{3x^2+4x+1} \& \frac{7}{2x^2-x-1}$$

$$(3x+1)(x+1)(x-1)(2x+1)$$

$$D: (-\infty, -1) \cup (-1, -\frac{1}{2}) \cup (-\frac{1}{2}, -\frac{1}{3}) \cup (-\frac{1}{3}, 1) \cup (1, \infty)$$

$$17. \frac{3x}{4x^2+5x+1} \& \frac{5}{3x^2-2x-1}$$

$$(4x+1)(x+1)(x-1)(3x+1)$$

$$D: (-\infty, -1) \cup (-1, -\frac{1}{3}) \cup (-\frac{1}{3}, -\frac{1}{4}) \cup (-\frac{1}{4}, 1) \cup (1, \infty)$$

$$18. \frac{1}{x^2-16} \& \frac{x+6}{2x^3-8x^2}$$

$$2x^2(x+4)(x-4)$$

$$D: (-\infty, -4) \cup (-4, 0) \cup (0, 4) \cup (4, \infty)$$

$$19. \frac{5}{x^2-25} \& \frac{x+9}{3x^3-15x^2}$$

$$3x^2(x+5)(x-5)$$

$$D: (-\infty, -5) \cup (-5, 0) \cup (0, 5) \cup (5, \infty)$$

$$20. \frac{12x-6}{x^2+3x} \& \frac{4x^2+13x+3}{4x^2-1}$$

$$x(x+3)(2x+1)(2x-1)$$

$$D: (-\infty, -3) \cup (-3, -\frac{1}{2}) \cup (-\frac{1}{2}, 0) \cup (0, \frac{1}{2}) \cup (\frac{1}{2}, \infty)$$

**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

