

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
Determining an LCD	1, 3, 4	2, 5, 6	7 - 12
Restricting the domain in interval notation	1, 3, 4	2, 5, 6	7 - 12
Solving rational equations	1, 3, 4	2, 5, 6	7 - 12
Checking solutions	1, 3, 4	2, 5, 6	7 - 12

Solve each equation. State your LCD & Domain restriction. Check each solution(s) for extraneous solutions.

1. $\frac{x}{5} + 3 = 9$ ^S LCD: 5
 D: $(-\infty, \infty)$

$x = 30$

$9 = 9 \checkmark$

2. $\frac{x}{5} + \frac{5x}{4} = \frac{x}{12}$

LCD: 60
 D: $(-\infty, \infty)$

$x = 0$

$0 = 0 \checkmark$

3. $2 - \frac{8}{x} = 6$

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

$x = -2$

$6 = 6 \checkmark$

4. $2 + \frac{10}{x} = x + 5$

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

$x = -5, 2$

$0 = 0 \checkmark$ $5 = 5 \checkmark$

5. $\frac{a}{5} = \frac{a-3}{2}$

LCD: 10
 D: $(-\infty, \infty)$

$a = 5$

$1 = 1 \checkmark$

6. $\frac{x-3}{5} + \frac{x-2}{2} = \frac{1}{2}$

LCD: 10
 D: $(-\infty, \infty)$

$x = 3$

$\frac{1}{2} = \frac{1}{2} \checkmark$

Solve each equation and check each proposed solution.

7. $\frac{3}{2a-5} = -1$

LCD: $2a-5$
 $D: (-\infty, \frac{5}{2}) \cup (\frac{5}{2}, \infty)$

$a=1$

$-1 = -1 \checkmark$

8. $\frac{4y}{y-4} + 5 = \frac{5y}{y-4}$

LCD: $y-4$
 $D: (-\infty, 4) \cup (4, \infty)$

$y=5$

$25 = 25 \checkmark$

9. $2 + \frac{3}{a-3} = \frac{a}{a-3}$

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

\emptyset

$a \neq 3$

10. $\frac{1}{x+3} + \frac{6}{x^2-9} = 1$

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

$x=4$

$x \neq -3$

$1 = 1 \checkmark$

$1 \neq \frac{7}{0} \times$

11. $\frac{2y}{y+4} + \frac{4}{y+4} = 3$

LCD: $y+4$
 $D: (-\infty, -4) \cup (-4, \infty)$

$y=-8$

$3 = 3 \checkmark$

12. $\frac{2x}{x+2} - 2 = \frac{x-8}{x-2}$

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

$x=-4, 6$

$-\frac{1}{2} = -\frac{1}{2} \checkmark$

$2 = 2 \checkmark$

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.

