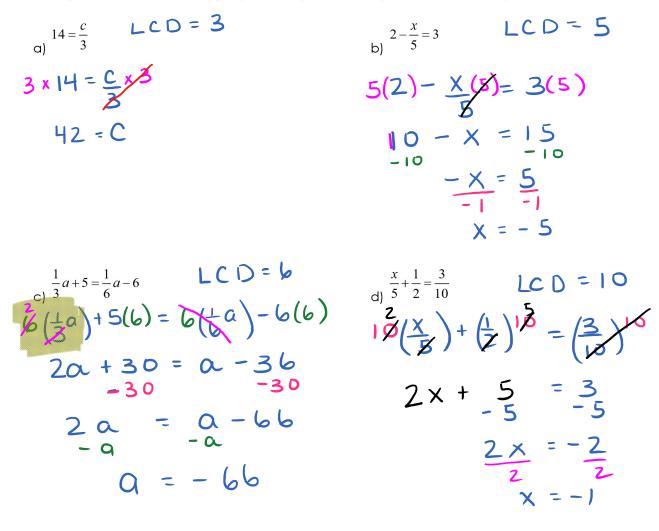


Math 9 Review – Part 4 Solving Equations with Rational Coefficients

When an algebraic equation contains fractions (rational expressions), we will remove the denominator(s) by multiplying each term by the **lowest common denominator**.

The lowest common denominator (LCD) is the lowest common multiple that a set of fractions share.

Example 1: Solve the following equations. (Eliminate any denominators first.)



Mrs. Shaw

F & PC 10

e) $\frac{x+1}{3} - \frac{x-2}{7} = 1$ LCD = 21 $\frac{7}{21}\left(\frac{X+1}{3}\right) - \frac{2}{21}\left(\frac{X-2}{7}\right) = 1 (21)$ 7(x+1) - 3(x-2) = 217(x) + 7(1) + (-3)(x) - (2)(-3) = 27x + 7 - 3x + 6 = 214X + 13 = 21-13 -13 $\frac{4 \times = \frac{8}{4}}{4 \times = 2}$ g) $\frac{48}{a} = 6$ 48)= 6(a) 48 = 60 8 = a

LCD = 6 f) $\frac{1}{2}(p+1) + \frac{1}{3}(2p+1) = 9$ $\frac{1}{2}(p+1) + \frac{1}{2}(2p+1) = 9(6)$ 3(p+r) + 2(2p+r) = 543p+3 + 4p +2 = 54 7p + 5 = 547<u></u> P=7 P=7 h) $2 = \frac{12}{x+4}$ (x+4)(2) = (12)(x+4)2(x+4) = 122x + 8 = 12-8 -8 2x = 4x = 2



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