

To eliminate fractions from an equation, multiply both sides of the equation by the *least common denominator* of all the fractions in the equation.

Practice this method on the following equations.

$$1. \quad 8 \left( -\frac{3}{8}p + \frac{7}{8} \right) = \frac{19}{8}$$

$$-3p + 7 = 19$$

$$-3p = 12$$

$$p = -4$$

$$2. \quad 6 \left( \frac{5}{6}x + \frac{7}{6} \right) = \frac{2}{6}$$

$$5x + 7 = 2$$

$$5x = -5$$

$$x = -1$$

$$3. \quad 10 \left( \frac{1}{5}x + \frac{3}{10} \right) = -4$$

$$2x + 3 = -40$$

$$2x = -43$$

$$x = -\frac{43}{2}$$

$$4. \quad 6 \left( \frac{1}{6}x + 4 \right) = \frac{5}{6}$$

$$x + 24 = 5$$

$$x = -19$$

$$5. \quad 12 \left( \frac{5}{2}x + \frac{2}{3} \right) = \frac{5}{4}$$

$$30x + 8 = 15$$

$$30x = -7$$

$$x = -\frac{7}{30}$$

~~$$6. \quad \frac{12+x}{2} = 8$$

$$12+x = 16$$

$$x = 4$$~~

$$7. \quad 12 \left( \frac{3}{4}a - \frac{1}{2} \right) = a + \frac{2}{3}$$

$$9a - 6 = 12a + 8$$

$$-14 = 3a$$

$$-\frac{14}{3} = a$$

$$8. \quad 8 \left( \frac{1}{8} + \frac{5}{8}x - \frac{1}{2} \right) = \left( \frac{1}{2}x + \frac{7}{8} \right)$$

$$1 + 5x - 4 = 4x + 7$$

$$5x - 4 = 4x + 7$$

$$x = 11$$

$$9. \quad 3 \left( -\frac{2}{3}x + \frac{4}{3} \right) = \left( -\frac{10}{3} \right)^3$$

$$-2x + 4 = -10$$

$$-2x = -14$$

$$x = 7$$

$$10. \quad 5 \left( \frac{4}{5} + 3x \right) = \left( \frac{3}{5} \right)^5$$

$$4 + 15x = 3$$

$$15x = -1$$

$$x = -\frac{1}{15}$$

$$11. \quad 7 \left( \frac{2}{7}x + \frac{4}{7} \right) = (-3)^7$$

$$2x + 4 = -21$$

$$2x = -25$$

$$x = -\frac{25}{2}$$

$$12. \quad \frac{2+w}{3} = 10 \cdot 3$$

$$2+w = 30$$

$$w = 28$$

$$13. \quad 6 \left( \frac{2}{3}y - \frac{11}{6} \right) = (28)^6$$

$$4y - 11 = 168$$

$$4y = 179$$

$$y = \frac{179}{4}$$

$$14. \quad 18 \left( -\frac{1}{6}x + 1 \right) = \left( \frac{7}{9} \right)^{18}$$

$$-3x + 18 = 14$$

$$-3x = -4$$

$$x = \frac{4}{3}$$

$$15. \quad 14 \left( \frac{2}{7}y + 15 \right) = \left( \frac{12}{14}y + 9 \right)^{14}$$

$$4y + 210 = 12y + 126$$

$$210 = 8y + 126$$

$$84 = 8y$$

$$\frac{84}{8} = y = \frac{21}{2}$$

$$16. \quad 24 \left( \frac{5}{6}x - \frac{3}{8}x \right) = \left( \frac{1}{2}x - 2 \right)^{24}$$

$$20x - 9x = 12x - 48$$

$$11x = 12x - 48$$

$$-10x = -12x - 48$$

$$-x = -48$$

$$x = 48$$