

ANSWER KEY

Complete #'s 2, 15, and 4 other problems of your choice.

Write the following linear equations in Standard Form.

$$1. \quad -\frac{2000}{15}x = \frac{1}{5}y - 13$$

$$-15 \left[-\frac{2000}{15}x = \frac{1}{5}y - 13 \right]$$

$$2000x = -3y + 195$$

$$+3y \quad +3y$$

$$2000x + 3y = 195$$

$$10. \quad y = \frac{3}{42}x + \frac{12}{2}$$

$$-42 \left[y = \frac{3}{42}x + \frac{12}{2} \right]$$

$$-42y = -3x - 252$$

$$+3x \quad +3x$$

$$\frac{1}{3}(3x - 42y = -252)$$

$$x - 14y = -84$$

$$2. \quad -\frac{8}{3}x + 2 = \frac{9}{7}y$$

$$-21 \left[-\frac{8}{3}x + 2 = \frac{9}{7}y \right]$$

$$56x + 42 = -27y$$

$$+27y \quad +27y$$

$$56x + 27y - 42 = 0$$

$$+42 \quad +42$$

$$56x + 27y = 42$$

$$11. \quad \frac{37}{7}y = -\frac{62}{21}x + \frac{19}{35}$$

$$105 \left[\frac{37}{7}y = -\frac{62}{21}x + \frac{19}{35} \right]$$

$$555y = -310x + 57$$

$$+310x \quad +310x$$

$$310x + 555y = 57$$

$$3. \quad \frac{1}{4}y = 13x - \frac{14}{6}$$

$$-12 \left[\frac{1}{4}y = 13x - \frac{14}{6} \right]$$

$$-3y = -156x + 28$$

$$+156x \quad +156x$$

$$156x - 3y = 28$$

$$12. \quad 3\frac{1}{3}x - \frac{4}{5} - 4\frac{1}{4}y = -\frac{8}{7}$$

$$420 \left[\frac{10}{3}x - \frac{4}{5} - \frac{17}{4}y = -\frac{8}{7} \right]$$

$$1400x - 336 - 1785y = -480$$

$$+336$$

$$+336$$

$$1400x - 1785y = -144$$

$$4. \quad y = \frac{3}{7}x - \frac{5}{9} - x - \frac{10}{9}$$

$$63 \left[y = \frac{3}{7}x - \frac{5}{9} - x - \frac{10}{9} \right]$$

$$63y = 27x - 35 - 63x - 70$$

$$63y = -36x - 105$$

$$+36x \quad +36x$$

$$\frac{1}{3} (36x + 63y = -105)$$

$$12x + 21y = -35$$

$$5. \quad \frac{4y}{3} = \frac{7x}{2} - \frac{11}{6}$$

$$-6 \left[\frac{4y}{3} = \frac{7x}{2} - \frac{11}{6} \right]$$

$$-8y = -21x + 11$$

$$+21x \quad +21x$$

$$21x - 8y = 11$$

$$6. \quad -7\frac{1}{2}y = 4\frac{3}{2}x + 10$$

$$-2 \left[-\frac{15}{2}y = \frac{11}{2}x + 10 \right]$$

$$15y = -11x - 20$$

$$+11x \quad +11x$$

$$11x + 15y = -20$$

$$13. \quad -\frac{4}{9}y + \frac{1}{3}y = -\frac{11}{18}x + 27$$

$$18 \left[-\frac{4}{9}y + \frac{1}{3}y = -\frac{11}{18}x + 27 \right]$$

$$-18y + 6y = -11x + 486$$

$$+11x$$

$$+11x$$

$$11x - 12y = 486$$

$$14. \quad \frac{1}{3}y = \frac{2}{4}x - 6$$

$$-6 \left[\frac{1}{3}y = \frac{2}{4}x - 6 \right]$$

$$-2y = -3x + 36$$

$$+3x \quad +3x$$

$$3x - 2y = 36$$

$$15. \quad \frac{5}{15}x - \frac{2}{3}y = -2x + 3$$

$$15 \left[\frac{5}{15}x - \frac{2}{3}y = -2x + 3 \right]$$

$$5x - 10y = -30x + 45$$

$$+30x$$

$$+30x$$

$$\frac{1}{5} (35x - 10y = 45)$$

$$7x - 2y = 9$$

$$7. \quad \frac{7}{9}y = \frac{19}{81}x - \frac{32}{243}$$

$$-243 \left[\frac{7}{9}y = \frac{19}{81}x - \frac{32}{243} \right]$$

$$\begin{array}{r} -189y = -57x + 32 \\ +57x \quad +57x \\ \hline \end{array}$$

$$57x - 189y = 32$$

$$8. \quad \frac{16}{3}x = \frac{4}{7}y + 26$$

$$21 \left[\frac{16}{3}x = \frac{4}{7}y + 26 \right]$$

$$\begin{array}{r} 112x = 12y + 546 \\ -12y \quad -12y \\ \hline \end{array}$$

$$\frac{1}{2}(112x - 12y = 546)$$

$$56x - 6y = 273$$

$$9. \quad \frac{1}{4}y = \frac{3}{8}x + \frac{1}{16}$$

$$-8 \left[\frac{1}{4}y = \frac{3}{8}x + \frac{1}{16} \right]$$

$$\begin{array}{r} -2y = -3x - \frac{1}{2} \\ +3x \quad +3x \\ \hline \end{array}$$

$$3x - 2y = -\frac{1}{2}$$

$$16. \quad \frac{37}{7}y = \frac{-62}{21}x + \frac{14}{35}$$

$$105 \left[\frac{37}{7}y = \frac{-62}{21}x + \frac{14}{35} \right]$$

$$\begin{array}{r} 555y = -310x + 42 \\ +310x \quad +310x \\ \hline \end{array}$$

$$310x + 555y = 42$$

$$17. \quad \frac{5}{4}y + \frac{7}{8}x = \frac{6}{16}x + 20$$

$$8 \left[\frac{5}{4}y + \frac{7}{8}x = \frac{3}{8}x + 20 \right]$$

$$\begin{array}{r} 10y + 7x = 3x + 160 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{1}{2}(4x + 10y = 160)$$

$$2x + 5y = 80$$