

Complete #'s 7, 15, and 4 other problems of your choice.

Write the following linear equations in Standard Form.

$$1. \frac{3}{28}x + 3 = \frac{2}{42}y$$

$$84 \left[\frac{3}{28}x + 3 = \frac{2}{42}y \right]$$

$$9x + 252 = 4y$$

$$\begin{array}{r} 9x + 252 = 4y \\ -4y \quad -4y \\ \hline 9x - 4y + 252 = 0 \\ -252 \quad -252 \\ \hline 9x - 4y = -252 \end{array}$$

$$9x - 4y = -252$$

$$2. -\frac{3}{4}y = -\frac{6}{15}x + 3$$

$$60 \left[-\frac{3}{4}y = -\frac{6}{15}x + 3 \right]$$

$$\begin{array}{r} -45y = -24x + 180 \\ +24x \quad +24x \\ \hline 24x - 45y = 180 \end{array}$$

$$\frac{1}{3} (24x - 45y = 180)$$

$$8x - 15y = 60$$

$$3. -\frac{2}{7}x + 4 = \frac{7}{17}y$$

$$-119 \left[-\frac{2}{7}x + 4 = \frac{7}{17}y \right]$$

$$\begin{array}{r} 34x - 476 = -49y \\ +49y \quad +49y \\ \hline 34x - 476 = -49y \end{array}$$

$$\begin{array}{r} 34x - 476 = -49y \\ +476 \quad +476 \\ \hline 34x - 49y = -476 \end{array}$$

$$34x - 49y = -476$$

$$10. -\frac{2}{7}x + 42 = \frac{7}{19}y$$

$$-133 \left[-\frac{2}{7}x + 42 = \frac{7}{19}y \right]$$

$$\begin{array}{r} 38x - 5586 = -49y \\ +49y \quad +49y \\ \hline 38x - 5586 = -49y \end{array}$$

$$\begin{array}{r} 38x - 5586 = -49y \\ +5586 \quad +5586 \\ \hline 38x - 49y = -5586 \end{array}$$

$$38x - 49y = -5586$$

$$11. -\frac{1}{4}x = \frac{3}{4}y + 5$$

$$-4 \left[-\frac{1}{4}x = \frac{3}{4}y + 5 \right]$$

$$\begin{array}{r} x = -3y - 20 \\ +3y \quad +3y \\ \hline x + 3y = -20 \end{array}$$

$$x + 3y = -20$$

$$12. -\frac{13}{97}x + \frac{4}{83}y = \frac{2}{29}x + \frac{82}{7}$$

$$-1,634,353 \left[-\frac{13}{97}x + \frac{4}{83}y = \frac{2}{29}x + \frac{82}{7} \right]$$

$$\begin{array}{r} 219,037x - 78,764y = -112,714x - 19,145,278 \\ +112,714x \quad +112,714x \\ \hline 331,751x - 78,764y = -19,145,278 \end{array}$$

$$331,751x - 78,764y = -19,145,278$$

$$4. -4y = 2x - \frac{1}{4}$$

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

$$-16y = 8x - 1$$

$$-8x \quad -8x$$

$$-1 \left[-8x - 16y = -1 \right]$$

$$8x + 16y = 1$$

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

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

$$-8y + 6y = -11x + 486$$

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

$$11x - 2y = 486$$

$$5. -\frac{11}{7}x + \frac{3}{2} - \frac{7}{11}y = \frac{17}{15} + 3$$

$$-2310 \left[-\frac{11}{7}x + \frac{3}{2} - \frac{7}{11}y = \frac{17}{15} + 3 \right]$$

$$3630x - 3465 + 1470y = -249 - 6930$$

$$3630x - 3465 + 1470y = -9548$$

$$+3465$$

$$+3465$$

$$3630x + 1470y = -6083$$

$$14. -\frac{8}{13}x + 31 = \frac{7}{18}y$$

$$-234 \left[-\frac{8}{13}x + 31 = \frac{7}{18}y \right]$$

$$144x - 7254 = 91y$$

$$+91y \quad +91y$$

$$144x + 91y - 7254 = 0$$

$$+7254 \quad +7254$$

$$144x + 91y = 7254$$

$$6. -\frac{2}{11}x = \frac{3}{47}y - \frac{12}{67}$$

$$-34639 \left[-\frac{2}{11}x = \frac{3}{47}y - \frac{12}{67} \right]$$

$$6298x = -2211y + 6204$$

$$+2211y \quad +2211y$$

$$6298x + 2211y = 6204$$

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

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

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

$$+30x$$

$$+30x$$

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

$$7x - 2y = 9$$

$$\begin{aligned}
 7. \quad \frac{7}{12}y &= -\frac{1}{18}(-x+3) + \frac{3}{24} \\
 -72 \left[\frac{7}{12}y &= -\frac{1}{18}(-x+3) + \frac{3}{24} \right] \\
 -42y &= 4(-x+3) - 9 \\
 -42y &= -4x + 12 - 9 \\
 +4x \quad +4x & \\
 \hline
 4x - 42y &= 3
 \end{aligned}$$

$$\begin{aligned}
 16. \quad \frac{2}{51}y - 23 &= \frac{57}{17}x \\
 -51 \left[\frac{2}{51}y - 23 &= \frac{57}{17}x \right] \\
 -2y + 1173 &= -171x \\
 +171x \quad +171x & \\
 \hline
 171x - 2y + 1173 &= 0 \\
 -1173 \quad -1173 & \\
 \hline
 171x - 2y &= -1173
 \end{aligned}$$

$$\begin{aligned}
 8. \quad \frac{15}{18}x - 30 &= \frac{17}{18}y + \frac{14}{18}x + 37 \\
 18 \left[\frac{15}{18}x - 30 &= \frac{17}{18}y + \frac{14}{18}x + 37 \right] \\
 15x - 540 &= 17y + 14x + 666 \\
 -14x \quad -14x & \\
 \hline
 x - 540 &= 17y + 666 \\
 -17y \quad -17y & \\
 \hline
 x - 17y - 540 &= 666 \\
 +540 \quad +540 & \\
 \hline
 x - 17y &= 1206
 \end{aligned}$$

$$\begin{aligned}
 17. \quad \frac{5}{4}y + \frac{7}{8}x &= \frac{6}{16}x + 20 \\
 16 \left[\frac{5}{4}y + \frac{7}{8}x &= \frac{6}{16}x + 20 \right] \\
 20y + 14x &= 6x + 320 \\
 -6x \quad -6x & \\
 \hline
 \frac{1}{2}(8x + 2y &= 320) \\
 4x + y &= 160
 \end{aligned}$$

$$9. \frac{7}{15} x \left(-x + 2(x-1) - x + \frac{2}{4} \right)^{-1} = 8 \left(\frac{7}{2^2} \right) + \frac{4}{\frac{2^2}{3^2}} + \frac{1}{3}x + \left(\frac{1}{7^3} \cdot \frac{1}{7^2} \right) y$$

$$\frac{7}{15} x \left(-x + 2(x-1) - x + \frac{2}{4} \right)^{-1} = 8 \left(\frac{7}{2^2} \right) + \frac{4}{\frac{2^2}{3^2}} + \frac{1}{3}x + \left(\frac{1}{7^3} \cdot \frac{1}{7^2} \right) y$$

$$\frac{7}{15} x \left(-x + 2x - 2 - x + \frac{1}{2} \right)^{-1} = 14 + \frac{9}{4}y + \frac{1}{3}x + 7y$$

$$\frac{7}{15} x \left(-\frac{3}{2} \right)^{-1} = 14 + \frac{1}{3}x + \frac{37}{4}y$$

$$\frac{7}{15} x \left(-\frac{2}{3} \right) = 14 + \frac{1}{3}x + \frac{37}{4}y$$

$$-180 \left[-\frac{14}{45}x = 14 + \frac{1}{3}x + \frac{37}{4}y \right]$$

$$\begin{array}{r} 56x = -2520 - 60x - 1665y \\ +60x \qquad \qquad +60x \end{array}$$

$$\begin{array}{r} 116x = -2520 - 1665y \\ +1665y \qquad \qquad +1665y \end{array}$$

$$116x + 1665y = -2520$$