E - Block Equations

E

Complete #'s 7, 12, and 4 other problems of your choice.

1 $\frac{-3}{4}y = 4\left(\frac{1}{6}x - \frac{1}{5}\right)$

2 $6y + 10y = 7x + 3x + 17$

3 $8x = 15 - 9y + 2x$

4 $\frac{2}{8}y = 8 + 3y + 2x$

5 $\frac{4}{3}y + \frac{2}{5}x = \left(6 - \frac{8}{7}\right)\left(3x + \frac{4}{5}\right)$

6 $\frac{35}{2}y + \frac{28}{3} - \frac{17}{2} = \frac{96}{3}x + 4 - \frac{18}{2}y$

7 $\frac{-3}{2}x - 4y + 5.2 + \frac{-14}{15}y + \frac{4}{5}x = -12.10x$

8 $3/20y = -7/15x + 5/20y - 11/12$

9 $32x - \frac{21y}{3} = -7 + \frac{3x}{6}$

10 $\frac{4}{7}y = x\left(3 + \frac{1}{7}\right) + 10$

11 $8y - 3x - \frac{8}{9} - 54 = x + 4y + 2\left(\frac{4}{5} - \frac{1}{8}\right)$

12 $\frac{-6}{18}y = 80\left(\frac{5}{4}x\right)$

13 $\frac{-16}{8} + \frac{3}{4}y = -16 + \frac{16}{4}x + \frac{2}{4}x + \frac{3}{4}y$

14 $\frac{2}{15}y = \frac{15}{105}x - \frac{40}{210}$

15 $\frac{16}{24}x - \frac{30}{40}y = \frac{75}{30}$

16 $7y + 13 + \frac{1}{3}y = \frac{1}{2}x + 10$

1 $-\frac{3}{4}y = 4\left(\frac{1}{6}x - \frac{1}{5}\right)$

$-60\left[-\frac{3}{4}y = \frac{2}{3}x - \frac{4}{5}\right]$

$45y = -40x + 48$

$+40x \quad +40x$

$40x + 45y = 48$

2 $6y + 10y = 7x + 3x + 17$

$16y = 10x + 17$

$-10x \quad -10x$

$-1(-10x + 16y = 17)$

$10x - 16y = -17$

3 $8x = 15 - 9y + 2x$

$-2x \quad -2x$

$6x = 15 - 9y$

$+9y \quad +9y$

$6x + 9y = 15$

4 $\frac{2}{8}y = 8 + 3y + 2x$

$-4\left[\frac{2}{8}y = 8 + 3y + 2x\right]$

$-y = -32 - 12y - 8x$

$+8x \quad +8x$

$8x - y = -32 - 12y$

$+12y \quad +12y$

$8x + 11y = -32$

5 $\frac{4}{3}y + \frac{2}{5}x = \left(6 - \frac{8}{7}\right)\left(3x + \frac{4}{5}\right)$

$\frac{4}{3}y + \frac{2}{5}x = \frac{34}{7}\left(3x + \frac{4}{5}\right)$

$-105\left[\frac{4}{3}y + \frac{2}{5}x = \frac{34}{7}\left(3x + \frac{4}{5}\right)\right]$

$-140y - 42x = -510\left(3x + \frac{4}{5}\right)$

$-140y - 42x = -1530x + 408$

$+1530x \quad +1530x$

$\frac{1}{4}[1488x - 140y = 408]$

$372x - 35y = 102$

6 $\frac{35}{2}y + \frac{28}{3} - \frac{17}{2} = \frac{96}{3}x + 4 - \frac{18}{2}y$

$6\left[\frac{35}{2}y + \frac{28}{3} - \frac{17}{2} = \frac{96}{3}x + 4 - \frac{18}{2}y\right]$

$105y + 56 - 51 = 192x + 24 - 54y$

$-105y \quad -105y$

$5 = 192x + 24 - 159y$

$-24 \quad -24$

$-19 = 192x - 159y$

$192x - 159y = -19$

7 $-\frac{3}{2}x - 4y + 5.2 + \frac{-14}{15}y + \frac{4}{5}x = -12 \cdot 10x$

$30\left[-\frac{3}{2}x - 4y + 10 - \frac{14}{15}y + \frac{4}{5}x = -120x\right]$

$-45x - 120y + 300 - 28y + 24x = -3600x$

$-21x - 148y + 300 = -3600x$

$-300 \quad -300$

$-21x - 148y = -3600x - 300$

$+3600x \quad +3600x$

$3579x - 148y = -300$

8 $\frac{3}{20}y = -\frac{7}{15}x + \frac{5}{20}y - \frac{11}{12}$

$-\frac{5}{20}y \quad -\frac{5}{20}y$

$60\left[-\frac{2}{20}y = -\frac{7}{15}x - \frac{11}{12}\right]$

$-6y = -28x - 55$

$+28x \quad +28x$

$28x - 6y = -55$

9 $\frac{32x - 21y}{3} = -7 + \frac{3x}{6}$

$2\left[32x - 7y = -7 + \frac{1}{2}x\right]$

$64x - 14y = -14 + x$

$-x \quad -x$

$\frac{1}{7}\left[63x - 14y = -14\right]$

$9x - 2y = -2$

10 $\frac{4}{7}y = x\left(3 + \frac{1}{7}\right) + 10$

$7\left[\frac{4}{7}y = \frac{22}{7}x + 10\right]$

$4y = 22x + 70$

$-22x \quad -22x$

$-\frac{1}{2}\left[-22x + 4y = 70\right]$

$11x - 2y = -35$

11 $8y - 3x - \frac{8}{9} - 54 = x + 4y + 2\left(\frac{4}{5} - \frac{1}{8}\right)$

$180\left[30 - 3x - \frac{8}{9} = x + 4y + \frac{74}{20}\right]$

$5400 - 540x - 160 = 180x + 720y + 666$

$-180x \quad -180x$

$5240 - 720x = 720y + 666$

$-720y \quad -720y$

$5240 - 720x - 720y = 666$

$-5240 \quad -5240$

$-\frac{1}{2}\left[-720x - 720y = -4574\right]$

$360x + 360y = 2287$

12 $\frac{-6}{18}y = 80\left(\frac{5}{4}x\right)$

$-\frac{1}{3}y = 120x$

$-120x \quad -120x$

$-3\left[-120x - \frac{1}{3}y = 0\right]$

$360x + y = 0$

13 $\frac{-16}{8} + \frac{3}{4}y = -16 + \frac{16}{4}x + \frac{2}{4}x + \frac{3}{4}y$

$-2 + \frac{3}{4}y = -16 + 4x + \frac{1}{2}x + \frac{3}{4}y$

$-\frac{3}{4}y \qquad -\frac{3}{4}y$

$2\left[-2 = -16 + 4x + \frac{1}{2}x\right]$

$-4 = -32 + 8x + x$

$+32 \quad +32$

$28 = 9x$

$9x + 0y = 28$

14 $\frac{2}{15}y = \frac{15}{105}x - \frac{40}{210}$

$105\left[\frac{2}{15}y = \frac{1}{7}x - \frac{4}{21}\right]$

$14y = 15x - 20$

$-15x \quad -15x$

$-1\left[-15x + 14y = -20\right]$

$15x - 14y = 20$

15 $\frac{16}{24}x - \frac{30}{40}y = \frac{75}{30}$

$60\left[\frac{2}{3}x - \frac{3}{4}y = \frac{25}{10}\right]$

$\frac{1}{5}\left[40x - 45y = 150\right]$

$8x - 9y = 30$

16. $7y + 13 + \frac{1}{3}y = \frac{1}{2}x + 10$

$6\left[7y + 13 + \frac{1}{3}y = \frac{1}{2}x + 10\right]$

$42y + 78 + 2y = 3x + 60$

$-3x \quad -3x$

$-3x + 44y + 78 = 60$

$-78 \quad -78$

$-1\left[-3x + 44y = -18\right]$

$3x - 44y = 18$