

$$\begin{aligned} \underline{1.} \quad a.) \quad y - (5 - y) &= 9 \\ y - 5 + y &= 9 \\ 2y - 5 &= 9 \quad | +5 \\ 2y &= 14 \quad | :2 \\ \underline{\underline{y}} &= \underline{\underline{7}} \end{aligned}$$

$$\begin{aligned} b.) \quad 3y + 7 &= y - (y - 1) \\ 3y + 7 &= y - y + 1 \\ 3y + 7 &= 1 \quad | -7 \\ 3y &= -6 \quad | :3 \\ \underline{\underline{y}} &= \underline{\underline{-2}} \end{aligned}$$

$$\begin{aligned} c.) \quad 2y - (4 - y) &= 32 \\ 2y - 4 + y &= 32 \\ 3y - 4 &= 32 \quad | +4 \\ 3y &= 36 \quad | :3 \\ \underline{\underline{y}} &= \underline{\underline{12}} \end{aligned}$$

$$\begin{aligned} d.) \quad y - (8 - y) &= 16 \\ y - 8 + y &= 16 \\ 2y - 8 &= 16 \quad | +8 \\ 2y &= 24 \quad | :2 \\ \underline{\underline{y}} &= \underline{\underline{12}} \end{aligned}$$

$$\begin{aligned}
 e.) \quad & -16y + 41 = 30 - (y - 5) \\
 & -16y + 41 = 30 - y + 5 \\
 & -16y + 41 = 35 - y & | +16y \\
 & 41 = 35 + 15y & | -35 \\
 & 6 = 15y & | :15 \\
 & \frac{26}{15} = y \\
 & \underline{\underline{y = \frac{2}{5}}}
 \end{aligned}$$

$$\begin{aligned}
 f.) \quad & 8y \cdot (3 + 4) = 112 \\
 & 8y \cdot 7 = 112 \\
 & 56 \cdot y = 112 & | :56 \\
 & \underline{\underline{y = 2}}
 \end{aligned}$$

$$\begin{aligned}
 g.) \quad & 9 + 4y - 3 = 5 - (2y - 1) \\
 & 6 + 4y = 5 - 2y + 1 \\
 & 6 + 4y = 6 - 2y & | +2y \\
 & 6 + 6y = 6 & | -6 \\
 & 6y = 0 & | :6 \\
 & \underline{\underline{y = 0}}
 \end{aligned}$$

$$\begin{aligned}
 h.) \quad & 7y - (-12 + y) = 0 \\
 & 7y + 12 - y = 0 \\
 & 6y + 12 = 0 & | -12 \\
 & 6y = -12 & | :6 \\
 & \underline{\underline{y = -2}}
 \end{aligned}$$

$$\begin{aligned}
 \text{i.) } & 6y - (3 + 4y) = 10y - (6 + 6y) \\
 & 6y - 3 - 4y = 10y - 6 - 6y \\
 & 2y - 3 = 4y - 6 \quad | -2y \\
 & -3 = 2y - 6 \quad | +6 \\
 & 3 = 2y \quad | :2 \\
 & \underline{\underline{\frac{3}{2} = y}}
 \end{aligned}$$

$$\begin{aligned}
 \text{k.) } & 0,25y - (8 - 0,75y) = 12 \\
 & 0,25y - 8 + 0,75y = 12 \\
 & y - 8 = 12 \quad | +8 \\
 & \underline{\underline{y = 20}}
 \end{aligned}$$

$$\begin{aligned}
 \underline{2.} \quad \text{a.) } & 4 - 2 \cdot (y + 1) = 7 \\
 & 4 - 2y - 2 = 7 \\
 & 2 - 2y = 7 \quad | +2y \\
 & 2 = 2y + 7 \quad | -7 \\
 & -5 = 2y \quad | :2 \\
 & \underline{\underline{-\frac{5}{2} = y}}
 \end{aligned}$$

$$\begin{aligned}
 \text{b.) } & 18 - 7 \cdot (y - 1) = 29,5 \\
 & 18 - 7y + 7 = 29,5 \\
 & 25 - 7y = 29,5 \quad | +7y \\
 & 25 = 7y + 29,5 \quad | -29,5 \\
 & 3,5 = 7y \quad | :7 \\
 & \underline{\underline{0,5 = y}}
 \end{aligned}$$

$$\begin{aligned}
 \text{c.) } 3y - 5 \cdot (3+y) &= 15 \\
 3y - 15 - 5y &= 15 \\
 -2y - 15 &= 15 & | +2y \\
 -15 &= 2y + 15 & | -15 \\
 -30 &= 2y & | :2 \\
 \underline{\underline{-15}} &= y
 \end{aligned}$$

$$\begin{aligned}
 \text{d.) } 12 - 4 \cdot (2y+1) &= 64 \\
 12 - 8y - 4 &= 64 \\
 8 - 8y &= 64 & | +8y \\
 8 &= 8y + 64 & | -64 \\
 -56 &= 8y & | :8 \\
 \underline{\underline{-7}} &= y
 \end{aligned}$$

$$\begin{aligned}
 \text{e.) } 12 + 3 \cdot (y-1) &= 9 \cdot (y+3) \\
 12 + 3y - 3 &= 9y + 27 \\
 9 + 3y &= 9y + 27 & | -3y \\
 9 &= 6y + 27 & | -27 \\
 -18 &= 6y & | :6 \\
 \underline{\underline{-3}} &= y
 \end{aligned}$$

$$\begin{aligned}
 \text{f.) } 3y + (4y-1) \cdot 7 &= 86 \\
 3y + 28y - 7 &= 86 \\
 31y - 7 &= 86 & | +7 \\
 31y &= 93 & | :31 \\
 \underline{\underline{y}} &= 3
 \end{aligned}$$

$$\begin{aligned}
 g.) \quad & 5 - (y + 7) \cdot 2 = 11 \\
 & 5 - 2y - 14 = 11 \\
 & -9 - 2y = 11 \quad | +2y \\
 & -9 = 2y + 11 \quad | -11 \\
 & -20 = 2y \quad | :2 \\
 & \underline{\underline{-10 = y}}
 \end{aligned}$$

$$\begin{aligned}
 h.) \quad & 3y - 2 \cdot (y - (-4)) = 2 \\
 & 3y - 2y - 8 = 2 \\
 & y - 8 = 2 \quad | +8 \\
 & \underline{\underline{y = 10}}
 \end{aligned}$$

$$\begin{aligned}
 3. \quad a.) \quad & 3y - (2y - (-3y)) = 14 \\
 & 3y - 2y - 3y = 14 \\
 & -2y = 14 \quad | +2y \\
 & 0 = 2y + 14 \quad | -14 \\
 & -14 = 2y \quad | :2 \\
 & \underline{\underline{-7 = y}}
 \end{aligned}$$

$$\begin{aligned}
 b.) \quad & (15y - 3) \cdot (-8) = 264 \\
 & -120y + 24 = 264 \quad | +120y \\
 & 24 = 120y + 264 \quad | -264 \\
 & -240 = 120y \quad | :120 \\
 & \underline{\underline{-2 = y}}
 \end{aligned}$$

$$\begin{aligned}
 \text{c.) } 3 - 2 \cdot (2y - (-9)) &= 1 \\
 3 - 4y - 18 &= 1 \\
 -15 - 4y &= 1 \quad | +4y \\
 -15 &= 4y + 1 \quad | -1 \\
 -16 &= 4y \quad | :4 \\
 \underline{\underline{-4}} &= y
 \end{aligned}$$

$$\begin{aligned}
 \text{d.) } (-3) \cdot (-8 - 2y) &= 38 \\
 24 + 6y &= 38 \quad | -24 \\
 6y &= 14 \quad | :6 \\
 y &= \frac{14}{6} = \frac{7}{3}
 \end{aligned}$$

$$\begin{aligned}
 \text{e.) } (15 - 2y) \cdot (-4) &= 20 \\
 -60 + 8y &= 20 \quad | +60 \\
 8y &= 80 \quad | :8 \\
 \underline{\underline{y}} &= 10
 \end{aligned}$$

$$\begin{aligned}
 \text{f.) } 29 - 2y &= (9 - 3y) \cdot (-7) \\
 29 - 2y &= -63 + 21y \quad | +2y \\
 29 &= -63 + 23y \quad | +63 \\
 92 &= 23y \quad | :23 \\
 \underline{\underline{4}} &= y
 \end{aligned}$$

4.

$$a.) \quad 18y - (1-5) - 2y = 29$$

$$18y + 5 + 2y = 29$$

$$20y + 5 = 29 \quad | -5$$

$$20y = 24 \quad | :20$$

$$y = \frac{6 \cdot 24}{20 \cdot 5} = \frac{6}{5}$$

$$b.) \quad 10 - 2 \cdot (3y - 4) = 36 - 12y$$

$$10 - 6y + 8 = 36 - 12y$$

$$18 - 6y = 36 - 12y \quad | +12y$$

$$18 + 6y = 36 \quad | -18$$

$$6y = 18 \quad | :6$$

$$y = 3$$

$$c.) \quad (24y - 2 \cdot (y + 6)) \cdot 2 = 64$$

$$(24y - 2y - 12) \cdot 2 = 64$$

$$(22y - 12) \cdot 2 = 64$$

$$44y - 24 = 64 \quad | +24$$

$$44y = 88 \quad | :44$$

$$y = 2$$

$$d.) \quad 45 \cdot (-2) = 18 - 3x \cdot (4 - (-2))$$

$$-90 = 18 - 3x \cdot 6$$

$$-90 = 18 - 18x \quad | +18x$$

$$18x - 90 = 18 \quad | +90$$

$$18x = 108 \quad | :18$$

$$x = 6$$

$$\begin{aligned}
 e.) \quad & 5,5y - 3 \cdot (4 + 2,5y) = -4 \\
 & 5,5y - 12 - 7,5y = -4 \\
 & \quad -2y - 12 = -4 \quad | +2y \\
 & \quad \quad -12 = 2y - 4 \quad | +4 \\
 & \quad \quad \quad -8 = 2y \quad | :2 \\
 & \quad \quad \quad \quad -4 = y
 \end{aligned}$$

$$\begin{aligned}
 f.) \quad & 3,8y + 4(17 - 2y) \cdot (-3) = 61,8y \\
 & 3,8y + 4 \cdot (-51 + 6y) = 61,8y \\
 & 3,8y - 204 + 24y = 61,8y \\
 & \quad 27,8y - 204 = 61,8y \quad | -27,8y \\
 & \quad \quad -204 = 34y \quad | :34 \\
 & \quad \quad \quad -6 = y
 \end{aligned}$$