p. 35, #15-22 all, #24

(15) $3t + 4 = 12 + 3t$

$-3t \qquad -3t$

$4 \neq 12$

No solution

(16) $6d + 8 = 14 + 3d$

$-3d \qquad -3d$

$3d + 8 = 14$

$3d = 6$

$\boxed{d = 2}$

(17) $2(h+1) = 5h - 7$

$2h + 2 = 5h - 7$

$-5h \qquad -5h$

$-3h + 2 = -7$

$-3h = -9$

$\boxed{h = 3}$

(18) $12y + 6 = 6(2y + 1)$

$12y + 6 = 12y + 6$

$-12y \qquad -12y$

$6 = 6$

All real numbers are solutions.

(19) $-\frac{w}{5} = \frac{w}{5} - \frac{1}{10}$ $\cdot 10 \quad \cdot 10 \quad \cdot 10$

$-2w = 2w - 1$

$-2w \qquad -2w$

$-4w = -1$

$\boxed{w = \frac{1}{4}}$

(20) $\frac{x}{12} + 1 = \frac{x}{3} - \frac{x}{4}$ $\cdot 12 \quad \cdot 12 \quad \cdot 12 \quad \cdot 12$

$x + 12 = 4x - 3x$

$x + 12 = x$

$-x \qquad -x$

$12 \neq 0$

No solution

(21) $3(4g+6) = 2(6g+9)$

$12g + 18 = 12g + 18$

$-12g \qquad -12g$

$18 = 18$

All real numbers are solutions.

(22) $5(1+2m) = \frac{1}{2}(8+20m)$

$5 + 10m = 4 + 10m$

$-10m \qquad -10m$

$5 \neq 4$

No solution

(24)

$6(2y+6) = 4(9+3y)$

$12y + 36 = 36 + 12y$

$12y + 36 = 36 + 12y$

$-12y \qquad -12y$

$36 = 36$

The equation has no solution.

All real numbers are solutions.

By subtracting 36 from both sides, the book went down the path of death and destruction (PODAD). It is easier to get the variable to one side first by subtracting 12y. But the book still ended up with the correct equation $0 = 0$. They wrongly interpreted it as "no solution", when all real numbers will work.