[1] p. 157 # 3-13odd, 22-28

Key

A#10 [2] p. 158 #32-43

[1] p. 157 #3-13odd, 22-28

3. $8t+5=6t+1$

$+(-6t)$ $+(-6t)$

$2t+5=1$

$+(-5)$ $+(-5)$

$\frac{2t}{2}=\frac{-4}{2}$

$t=-2$

Check $-16+5=-12+1$

$-11=-11$ ✓

5. $8c+5=4c-11$

$8c+5=4c+(-11)$

$+(-4c)$ $+(-4c)$

$4c+5=-11$

$+(-5)$ $+(-5)$

$\frac{4c}{4}=\frac{-16}{4}$

$c=-4$

Check $-32+5=-16-11$

$-27=-16+(-11)$ ✓

7. $10b+18=8b+4$

$+(-8b)$ $+(-8b)$

$2b+18=4$

$+(-18)$ $+(-18)$

$\frac{2b}{2}=\frac{-14}{2}$

$b=-7$

Check $-70+18=-56+4$

$-52=-52$ ✓

9. $9a=6(a+4)$

$9a=6a+24$

$-6a$ $-6a$

$\frac{3a}{3}=\frac{24}{3}$

$a=8$

Check $72=6(8+4)$

$72=6(12)$ ✓

11. $3(d+12)=8-4d$

$3d+36=8+(-4d)$

$+4d$ $+4d$

$7d+36=8$

$+(-36)$ $+(-36)$

$\frac{7d}{7}=\frac{-28}{7}$

$d=-4$

Check $3(-4+12)=8-(-16)$

$3(8)=8+16$

$24=24$ ✓

13. $40+14j=2(-4j-13)$

$40+14j=-8j-26$

$+8j$ $+8j$

$40+22j=-26$

$+(-40)$ $+(-40)$

$\frac{22j}{22}=\frac{-66}{22}$

$j=-3$

Check $40+(-42)=2(12-13)$

$-2=2(12+(-13))$

$-2=2(-1)$ ✓

22. $22x+70=17x-95$

$22x+70=17x+(-95)$

$+(-17x)$ $+(-17x)$

$5x+70=-95$

$+(-70)$ $+(-70)$

$\frac{5x}{5}=\frac{-165}{5}$

$x=-33$

23. $2-15n=5(-3n+2)$

$2+(-15n)=-15n+10$

$+15n$ $+15n$

$2=10$

No Real Solution

24. $12y+6=6(2y+1)$

$12y+6=12y+6$

$+(-12y)$ $+(-12y)$

$6=6$

$y=\{$All real #s$\}$

A#10 Continued

Key

25. $5(1+4m) = 2(3+10m)$

$5+20m = 6+20m$

$+(-20m) \quad +(-20m)$

$5 = 6$

No Real Solution

26. $2(3g+2) = \frac{1}{2}(12g+8)$

$6g+4 = 6g+4$

$+(-6g) \quad +(-6g)$

$4 = 4$

$g = \{$All Real #s$\}$

27. Error: 3 was not distributed

$3(x+5) = 3x+15$

$3x+15 = 3x+15$

$+(-3x) \quad +(-3x)$

$15 = 15$

$x = \{$All Real #s$\}$

28. Error: $0=0 \rightarrow$ The equation is always true.

Therefore, $y = \{$All real #s$\}$

All steps were correct.

*34. $\frac{5}{8}m - \frac{3}{8} = \frac{1}{2}m + \frac{7}{8}$

$\frac{5}{8}m + (-\frac{3}{8}) = \frac{4}{8}m + \frac{7}{8}$

$+(-\frac{4}{8}m) \quad -\frac{4}{8}m$

$\frac{1}{8}m + (-\frac{3}{8}) = \frac{7}{8}$

$+\frac{3}{8} \quad +\frac{3}{8}$

$\frac{1}{8}m = \frac{10}{8}$

$\times 8 \quad \times 8$

$m = 10$

(2) p. 158 #32-43

32. $-15c+7c+1 = 3-8c$

$-8c+1 = 3+(-8c)$

$+8c \quad +8c$

$1 = 3$

No Real Solution

33. $\frac{3}{2} + \frac{3}{4}a = \frac{1}{4}a - \frac{1}{2}$

$\frac{3}{2} + \frac{3}{4}a = \frac{1}{4}a + (-\frac{1}{2})$*

$+(-\frac{1}{4}a) \quad +(-\frac{1}{4}a)$

$\frac{3}{2} + \frac{1}{2}a = -\frac{1}{2}$

$+(-\frac{3}{2}) \quad +(-\frac{3}{2})$

$(2)\frac{1}{2}a = -2(2)$

$a = -4$

35. $n-10 = \frac{5}{6}n - 7 - \frac{1}{3}n$

$n+(-10) = \frac{5}{6}n + (-7) + (-\frac{2}{6}n)$

$n+(-10) = \frac{1}{2}n + (-7)$

$+(-\frac{1}{2}n) \quad +(-\frac{1}{2}n)$

$\frac{1}{2}n + (-10) = -7$

$+10 \quad +10$

$(2)\frac{1}{2}n = 3(2)$

$n = 6$

36. $3.7b+7 = 8.1b-19.4$

$3.7b+7 = 8.1b+(-19.4)$

$+(-3.7b) \quad +(-3.7b)$

$7 = 4.4b + (-19.4)$

$+19.4 \quad +19.4$

$\frac{26.4}{4.4} = \frac{4.4b}{4.4}$

$b = 6$

37. $6.2h+5-1.4h = 4.8h+5$

$6.2h+5+(-1.4h) = 4.8h+5$

$4.8h+5 = 4.8h+5$

$+(-4.8h) \quad +(-4.8h)$

$5 = 5$

$h = \{$All Real #s$\}$

A#10 Continued

Key

38. $0.7z + 1.9 + 0.1z = 5.5 - 0.4z$

$0.8z + 1.9 = 5.5 + (-0.4z)$

$+0.4z \qquad +0.4z$

$1.2z + 1.9 = 5.5$

$+(-1.9) \quad +(-1.9)$

$\frac{1.2z}{1.2} = \frac{3.6}{1.2}$

$z = 3$

39. $5.4t + 14.6 - 10.1t = 12.8 - 3.5t - 0.6$

$5.4t + 14.6 + (-10.1t) = 12.8 + (-3.5t) + (-0.6)$

$-4.7t + 14.6 = -3.5t + 12.2$

$+4.7t \qquad +4.7t$

$14.6 = 1.2t + 12.2$

$+(-12.2) \qquad +(-12.2)$

$\frac{2.4}{1.2} = \frac{1.2t}{1.2}$

$t = 2$

40. $\frac{1}{8}(5y + 64) = \frac{1}{4}(20 + 2y)$

$\frac{5}{8}y + 8 = 5 + \frac{1}{2}y$

$+(-\frac{1}{2}y) \qquad +(-\frac{1}{2}y)$

$\frac{1}{8}y + 8 = 5$

$+(-8) \quad +(-8)$

$(8)\frac{1}{8}y = -3(8)$

$y = -24$

41. $14 - \frac{1}{5}(j - 10) = \frac{2}{5}(25 + j)$

$14 + (-\frac{1}{5})(j + (-10)) = \frac{2}{5}(25 + j)$

$14 + (-\frac{1}{5}j) + 2 = 10 + \frac{2}{5}j$

$+\frac{1}{5}j \qquad +\frac{1}{5}j$

$16 = \frac{3}{5}j + 10$

$+(-10) \qquad +(-10)$

$(\frac{5}{3})6 = \frac{3}{5}j(\frac{5}{3})$

$j = 10$

42. $5(1.2k + 6) = 7.1k + 34.4$

$6k + 30 = 7.1k + 34.4$

$+(-6k) \quad +(-6k)$

$30 = 1.1k + 34.4$

$+(-34.4) \qquad +(-34.4)$

$\frac{-4.4}{1.1} = \frac{1.1k}{1.1}$

$k = -4$

43. $-0.25(4v - 8) = 0.5(4 - 2v)$

$-0.25(4v + (-8)) = 0.5(4 + (-2v))$

$-v + 2 = 2 + (-v)$

$+v \qquad +v$

$2 = 2$

$v = \{\text{All Real \#s}\}$