31)	$\mathbb{R}$	37)	$\mathbb{R}$	43)	$\{-1\}$
32)	$\emptyset$	38)	$\{-5\}$	44)	$\mathbb{R}$
33)	$\{4\}$	39)	$\{-1\}$	45)	$\{-2\}$
34)	$\{14\}$	40)	$\{-1\}$	46)	$\{-5\}$
35)	$\{-3\}$	41)	$\mathbb{R}$	47)	$\{1\}$
36)	$\emptyset$	42)	$\{4\}$	48)	$\{0\}$

32) $\frac{1}{4}(20 - 4a) = 6 - a$

$$5 - a = 6 - a$$

$$5 - a + a = 6 - a + a$$

$$5 = 6$$

$$\emptyset$$

35) $5u + 5(1 - u) = u + 8$

$$5u + 5 - 5u = u + 8$$

$$5 = u + 8$$

$$5 - 8 = u + 8 - 8$$

$$-3 = u$$

$$\{-3\}$$

45) $3x + 2[1 - 3(x+2)] = 2x$

$3x + 2[1 - 3x - 6] = 2x$

$3x + 2[-5 - 3x] = 2x$

$3x - 10 - 6x = 2x$

$-10 - 3x = 2x$

$-10 - 3x +3x = 2x +3x$

$\dfrac{-10}{5} = \dfrac{5x}{5}$

$-2 = x$

$\{-2\}$

46) $2[5(w+3) - (w+1)] = 3(1+w)$

$2[5w + 15 - w - 1] = 3 + 3w$

$2[4w + 14] = 3 + 3w$

$8w + 28 = 3 + 3w$

$8w -3w + 28 = 3 + 3w -3w$

$5w + 28 = 3$

$5w + 28 -28 = 3 -28$

$\dfrac{5w}{5} = \dfrac{-25}{5}$

$w = -5$

$\{-5\}$

48) $3(r+1) - [2(3-2r) - 3(3-r)] = 2(r+5) - 4$

$3r + 3 - [6 - 4r - 9 + 3r] = 2r + 10 - 4$

$3r + 3 - [-r - 3] = 2r + 6$

$3r + 3 + r + 3 = 2r + 6$

$4r + 6 = 2r + 6$

$4r - 2r + 6 = 2r - 2r + 6$

$2r + 6 = 6$

$2r + 6 - 6 = 6 - 6$

$\dfrac{2r}{2} = \dfrac{0}{2}$

$r = 0$

$\{0\}$

40) $4(3y - 1) + 13 = 5y + 2$

$12y - 4 + 13 = 5y + 2$

$12y + 9 = 5y + 2$

$12y - 5y + 9 = 5y - 5y + 2$

$7y + 9 = 2$

$7y + 9 - 9 = 2 - 9$

$\dfrac{7y}{7} = \dfrac{-7}{7}$

$y = -1$

$\{-1\}$

Pg 644

53 - 67 all

By Wayne