24. $2+((-2x)+(-1)) = ((-2x)+(-1))+2$ (A1)

25. $((-2x)+(-1))+2 = (-2x)+((-1)+2)$ (A2) 26. $2 = 1+1$ (Successor function)

27. $(-1)+2 = (-1)+(1+1)$ (Substitute eq 26) 28. $((-1)+1)+1 = (-1)+(1+1)$ (A2)

29. $(-1)+1 = 0$ (A4) 30. $((-1)+1)+1 = 0+1$ (Substitute eq 29)

31. $0+1 = 1$ (A3) 32. $((-1)+1)+1 = 1$ (Transitivity of eq on 30, 31)

33. $(-1)+(1+1) = ((-1)+1)+1$ (Symmetry of eq 28)

34. $(-1)+(1+1) = 1$ (Transitivity of eq 33, 32)

35. $(-1)+2 = 1$ (Transitivity of eq on 27, 34) 36. $(-2x)+((-1)+2) = (-2x)+1$ (Substitute eq 35)

37. $((-2x)+(-1))+2 = (-2x)+1$ (Transitivity of eq on 25, 36)

38. $2+((-2x)+(-1)) = (-2x)+1$ (Transitivity of eq on 24, 37)

39. $x^2+(2+((-2x)+(-1))) = x^2+((-2x)+1)$ (Substitute eq 38)

40. $(-1)\cdot(2x) = -2x$ (Ex 2.1, 1(c)) 41. $2\cdot x = (1+1)\cdot x$ (Substitute eq 26)

42. $(1+1)\cdot x = 1\cdot x+1\cdot x$ (D) 43. $2\cdot x = 1\cdot x+1\cdot x$ (Transitivity of eq on 41, 42)

44. $(-1)\cdot(2\cdot x) = (-1)\cdot(1\cdot x+1\cdot x)$ (Substitute eq 43)

45. $(-1)\cdot(1\cdot x+1\cdot x) = (-1)\cdot(1\cdot x)+(-1)\cdot(1\cdot x)$ (D)

46. $((-1)\cdot 1)\cdot x = (-1)\cdot(1\cdot x)$ (M2) 47. $(-1)\cdot 1 = (-1)$ (M3)

48. $((-1)\cdot 1)\cdot x = (-1)\cdot x$ (Substitute eq 47) 49. $(-1)\cdot x = ((-1)\cdot 1)\cdot x$ (Symmetry of eq 48)

50. $(-1)\cdot x = (-1)\cdot(1\cdot x)$ (Transitivity of eq 49, 46)

51. $(-1)\cdot(1\cdot x) = (-1)\cdot x$ (Symmetry of eq 50)

52. $(-1)\cdot(1\cdot x+1\cdot x) = (-1)\cdot x+(-1)\cdot x$ (Substitute eq 51 in RHS of 45)

53. $(-1)\cdot(2\cdot x) = (-1)\cdot x+(-1)\cdot x$ (Transitivity of eq on 44, 52)

54. $(-1)\cdot(2x)+1 = (-2x)+1$ (Substitute eq 40)

55. $(-1)\cdot((-1)\cdot x+(-1)\cdot x)+1 = (-2x)+1$ (Substitute eq 53 in 54)

56. $(-1)\cdot((-1)\cdot x+(-1)\cdot x) = (-1)\cdot((-1)\cdot x)+(-1)\cdot((-1)\cdot x)$ (D)

57. $((-1)\cdot(-1))\cdot x = (-1)\cdot((-1)\cdot x)$ (M2) 58. $(-1)\cdot(-1) = 1$ (Ex 2.1, 1(d))

59. $((-1)\cdot(-1))\cdot x = 1\cdot x$ (Substitute eq 58) 60. $1\cdot x = x$ (M3)

61. $((-1)\cdot(-1))\cdot x = x$ (Transitivity of eq on 59, 60)