67. $\frac{6a-3}{3}$ **68.** $\frac{-8x+6}{2}$

69. $\frac{-9x+6}{-3}$ **70.** $\frac{10-5x}{-5}$

‹4› Removing Parentheses

Simplify each expression by removing the parentheses and combining like terms. See Example 7.

71. $-(5x+1)+7x$ **72.** $-(7a+3)+8a$

73. $-(-c+4)+5c-9$ **74.** $-(-y+4)+9+4y$

75. $-(7b-2)-1$ **76.** $-(a-1)-9$

77. $-(-w-4)-8+w$ **78.** $-(-y-3)-9y-1$

79. $x-(3x-1)$ **80.** $4x-(2x-5)$

81. $5-(y-3)$ **82.** $8-(m-6)$

83. $2m+3-(m+9)$

84. $7-8t-(2t+6)$

85. $-3-(-w+2)$

86. $-5x-(-2x+9)$

Simplify the following expressions by combining like terms. See Example 8.

87. $3x+5x+6+9$

88. $2x+6x+7+15$

89. $(-2x+3)+(7x-4)$

90. $(-3x+12)+(5x-9)$

91. $3a-7-(5a-6)$

92. $4m-5-(m-2)$

93. $2(a-4)-3(-2-a)$

94. $2(w+6)-3(-w-5)$

95. $3x(2x-3)+5(2x-3)$

96. $2a(a-5)+4(a-5)$

97. $-b(2b-1)-4(2b-1)$

98. $-2c(c-8)-3(c-8)$

99. $-5m+6(m-3)+2m$

100. $-3a+2(a-5)+7a$

101. $5-3(x+2)-6$

102. $7+2(k-3)-k+6$

103. $x-0.05(x+10)$

104. $x-0.02(x+300)$

Simplify each expression.

105. $3x-(4-x)$ **106.** $2+8x-11x$

107. $y-5-(-y-9)$ **108.** $a-(b-c-a)$

109. $7-(8-2y-m)$ **110.** $x-8-(-3-x)$

111. $\frac{1}{2}(10-2x)+\frac{1}{3}(3x-6)$

112. $\frac{1}{2}(x-20)-\frac{1}{5}(x+15)$

113. $\frac{1}{2}(3a+1)-\frac{1}{3}(a-5)$

114. $\frac{1}{4}(6b+2)-\frac{2}{3}(3b-2)$

115. $0.2(x+3)-0.05(x+20)$

116. $0.08x+0.12(x+100)$

117. $2k+1-3(5k-6)-k+4$

118. $2w-3+3(w-4)-5(w-6)$

119. $-3m-3[2m-3(m+5)]$

120. $6h+4[2h-3(h-9)-(h-1)]$

‹5› Applications

Solve each problem. See Example 9.

121. ***Perimeter of a corral.*** The perimeter of a rectangular corral that has width x feet and length $x+40$ feet is $2(x)+2(x+40)$. Simplify the expression for the perimeter. Find the perimeter if $x=30$ feet.

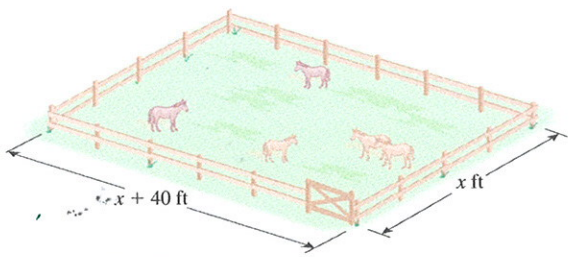

Figure for Exercise 121

122. ***Perimeter of a mirror.*** The perimeter of a rectangular mirror that has a width of x inches and a length of $x+16$ inches is $2(x)+2(x+16)$ inches. Simplify the expression for the perimeter. Find the perimeter if $x=14$ inches.