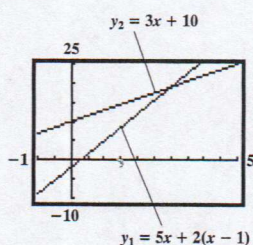
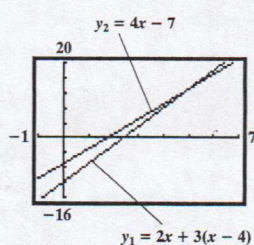
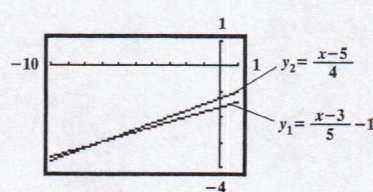
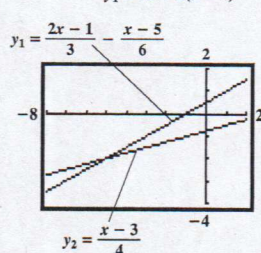


45. a. -2, 2    b.  $\emptyset$     46. a. -2, 2    b.  $\emptyset$     47. a. -1, 1    b.  $\{-3\}$     48. a. -5, 5    b.  $\{7\}$     49. a. -2, 4    b.  $\emptyset$   
 50. a. -3, 2    b.  $\{7\}$     51. 6    52. 3    53. -7    54. 59    55. 2    56. 3    57. 19    58. 6    59. -1    60. 1    61. identity  
 62. inconsistent equation    63. inconsistent equation    64. identity    65. conditional equation    66. conditional equation  
 67. inconsistent equation    68. inconsistent equation    69.  $\{-7\}$ ; conditional equation    70.  $\left\{\frac{46}{5}\right\}$ ; conditional equation  
 71.  $\emptyset$ ; inconsistent equation    72.  $\emptyset$ ; inconsistent equation    73.  $\{-4\}$ ; conditional equation    74. all real numbers; identity  
 75.  $\{8\}$ ; conditional equation    76.  $\{6\}$ ; conditional equation    77.  $\{-1\}$ ; conditional equation    78.  $\{3\}$ ; conditional equation  
 79.  $\emptyset$ ; inconsistent equation    80.  $\left\{\frac{1}{7}\right\}$ ; conditional equation    81.  $3(x-4) = 3(2-2x)$ ;  $\{2\}$     82.  $3(2x-5) = 5x+2$ ;  $\{17\}$   
 83.  $-3(x-3) = 5(2-x)$ ;  $\{0.5\}$     84.  $2x-5 = 4(3x+1)-2$ ;  $\{-0.7\}$     85. 2    86. 6    87. -7    88. -5    89.  $\{-2\}$     90.  $\{3\}$   
 91.  $\emptyset$  or no solution    92.  $\emptyset$  or no solution    93.  $\{10\}$     94.  $\{0\}$     95.  $\{-2\}$     96.  $\left\{\frac{4}{3}\right\}$     97. 142 pounds; 13 pounds  
 98. 178 pounds; 6 pounds    99. a. \$32,000    b. \$32,616; \$616    c. \$32,597; \$597    100. a. \$24,000    b. \$23,966; \$34    c. \$24,197; \$197  
 101. 2013    102. 2025    103. 11 learning trials; (11, 0.95)    104. 1 learning trial; (1, 0.5)    105. 125 liters    106. a.  $C = \frac{x + 0.35(200)}{x + 200}$   
 b. 300 liters

 116.  $\{3\}$ 

 117.  $\{5\}$ 

 118.  $\{-7\}$ 

 119.  $\{-5\}$ 


120. does not make sense    121. makes sense    122. makes sense    123. makes sense  
 124. false    125. false    126. true    127. false  
 129. 2    130. 20    131.  $x + 150$     132.  $20 + 0.05x$     133.  $4x + 400$

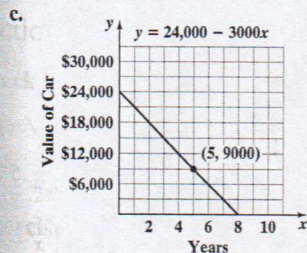
## Section 1.3

### Check Point Exercises

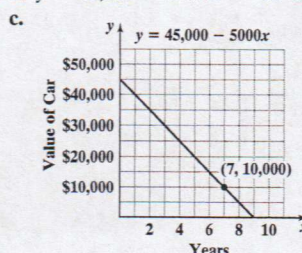
1. women: \$57,989; men: \$72,026    2. by 50 years after 1969, or in 2019    3. 300 min    4. \$1200    5. \$3150 at 9%; \$1850 at 11%  
 6. 50 ft by 94 ft    7.  $w = \frac{P-2l}{2}$     8.  $C = \frac{P}{1+M}$

### Exercise Set 1.3

1. 6    2. 7    3. 25    4. 40    5. 120    6. 140    7. 320    8. 360    9. 19 and 45    10. 17 and 41    11. 2    12. 5    13. 8  
 14. 2    15. all real numbers    16. 1    17. 5    18. -9    19. radio: 974 hr; TV: 1555 hr    20. Americans: 3.9 weeks; Italians: 7.9 weeks  
 21. carpenters: \$35,580; computer programmers: \$63,420    22. janitors: \$19,390; registered nurses: \$54,670    23. by 38 years after 1983, or in 2021  
 24. by 30 years after 1986, or in 2016  
 25. a.  $y = 24,000 - 3000x$     b. after 5 years



26. a.  $y = 45,000 - 5000x$     b. after 7 years



27. after 5 months; \$165    28. 10 rentals; \$90    29. 30 times    30. 20 times    31. a. 2014; 22,300 students  
 b.  $y_1 = 13,300 + 1000x$ ;  $y_2 = 26,800 - 500x$     32. 2025; 9,900,000    33. \$420    34. \$44    35. \$150    36. \$240    37. \$467.20    38. \$12  
 39. \$2000 at 6%; \$5000 at 8%    40. \$5000 at 5%; \$6000 at 8%    41. \$6000 at 12%; \$2000 at a 5% loss    42. \$7000 at 14%; \$5000 at a 6% loss  
 43. 50 yd by 100 yd    44. 40 ft by 120 ft    45. 36 ft by 78 ft    46. 23 m by 40 m    47. 2 in.    48. 6 ft    49. 11 hr    50. 17 hr  
 51. 5 ft 7 in.    52. \$1350    53. 7 oz    54. 11 min    55.  $w = \frac{A}{l}$     56.  $R = \frac{D}{T}$     57.  $b = \frac{2A}{h}$     58.  $B = \frac{3V}{h}$     59.  $P = \frac{I}{rt}$     60.  $r = \frac{C}{2\pi}$   
 61.  $m = \frac{E}{c^2}$     62.  $h = \frac{V}{\pi r^2}$     63.  $p = \frac{T-D}{m}$     64.  $M = \frac{P-C}{C}$     65.  $a = \frac{2A}{h} - b$     66.  $b = \frac{2A}{h} - a$     67.  $r = \frac{S-P}{Pt}$   
 68.  $t = \frac{S-P}{Pr}$     69.  $S = \frac{F}{B} + V$     70.  $r = -\frac{C}{S} + 1$     71.  $I = \frac{E}{R+r}$     72.  $h = \frac{A-2lw}{2l+2w}$     73.  $f = \frac{pq}{p+q}$     74.  $R_1 = \frac{RR_2}{R_2-R}$