

1.3 EXERCISES



Verbal and Writing Skills

Write using words.

1. $6 - x$

2. $10 - 2$

Fill in the blank.

3. The key phrase “how many more” indicates the operation _____.

Answer true or false.

4. The English phrase “five less than x ” written using symbols is $5 - x$.

Subtract.

5. $7 - 4$

6. $5 - 3$

7. $6 - 2$

8. $8 - 4$

9. $9 - 3$

10. $9 - 6$

11. $8 - 7$

12. $4 - 3$

13. $15 - 0$

14. $29 - 0$

15. $20 - 20$

16. $15 - 15$

17. If $700 - 600 = 100$, find $700 - 603$ using subtraction patterns.

18. If $900 - 800 = 100$, find $900 - 806$ using subtraction patterns.

19. If $300 - 200 = 100$, find $300 - 205$ using subtraction patterns.

20. If $800 - 700 = 100$, find $800 - 705$ using subtraction patterns.

Translate using symbols.

21. Nine minus two

22. Three decreased by a number

23. The difference of eight and y

24. The difference of three and a number

25. Ten subtracted from seventeen

26. Seven subtracted from a number

27. A number decreased by one

28. Eight minus two

29. Two less than some number

30. Nine less than twelve

Evaluate $9 - n$ for the given values of n .

31. If n is equal to 4

32. If n is equal to 6

33. If n is equal to 9

34. If n is equal to 1

Evaluate $x - 2$ for the given values of x .

35. If x is equal to 9

36. If x is equal to 5

37. If x is equal to 3

38. If x is equal to 9

Subtract and check. For more practice, refer to Appendix D.

39. $97 - 35$

40. $99 - 26$

41. $56 - 23$

42. $76 - 41$

43. $83 - 67$

44. $56 - 37$

45. $72 - 18$

46. $73 - 35$

47. $873 - 195$

48. $761 - 542$

49. $500 - 43$

50. $700 - 29$

51. $8912 - 3847$

52. $8721 - 654$

53. $5301 - 185$

54. $8801 - 4583$

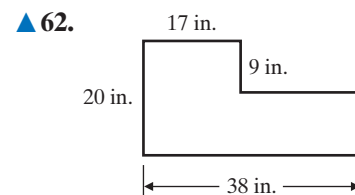
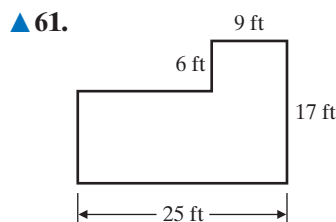
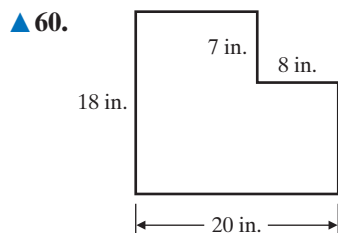
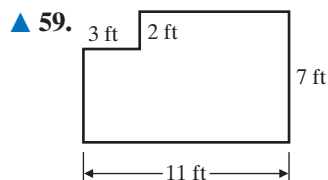
55.
$$\begin{array}{r} 15,107 \\ - 6,428 \\ \hline \end{array}$$

56.
$$\begin{array}{r} 29,002 \\ - 3,667 \\ \hline \end{array}$$

57.
$$\begin{array}{r} 164,300 \\ - 58,923 \\ \hline \end{array}$$

58.
$$\begin{array}{r} 796,020 \\ - 68,431 \\ \hline \end{array}$$

Find the perimeter of each shape consisting of rectangles.

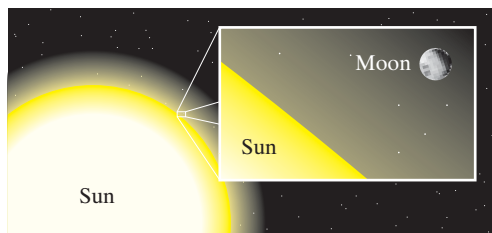


Applications

63. **Checking Account** Fill in the balances in Pedro's check register.

Check Number	Amount	Balance \$1364
# 123	\$238	
# 124	\$137	
# 125	\$ 69	
# 126	\$ 98	
# 127	\$369	

65. **Sun vs. Moon Diameter** The moon is about 400 times smaller than the sun.



The diameter of the sun is approximately 865,000 miles, and the diameter of the moon is approximately 2160 miles. How many more miles is the diameter of the sun than that of the moon?

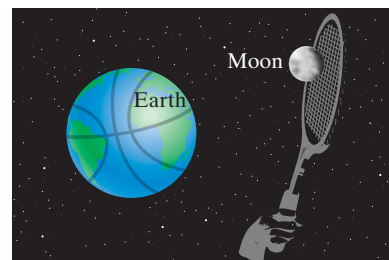
64. **Whale Population Decline** Although the International Whaling Commission has banned commercial whaling since 1987, several countries still hunt whales. As a result, the number of whales continues to decline, as shown in the following chart.

- (a) Which species has had the largest decline in population?
 (b) What is the decline in the total whale population?

Species	Approximate Population Years Earlier	Population in the World's Oceans 2000
Blue	275,000	5,000
Bowhead	60,000	8,500
Humpback	150,000	20,000

Source: Orange County Register

66. **Earth vs. Moon Diameter** If the moon were next to Earth it would be like a tennis ball next to a basketball.



The approximate polar diameter of Earth (distance through Earth from North Pole to South Pole) is 7900 miles. The diameter of the moon is approximately 2160 miles. Find the difference in the diameters of Earth and the moon.

Roller Coasters When a roller coaster descends at high speeds, the force exerted on a rider's body by the roller coaster becomes less than that of gravity, producing a sensation of weightlessness. Then when the roller coaster hits the bottom and either shoots up or turns sharply, a g-force is exerted on the rider's body for a fraction of a second. This g-force can be stronger than the one felt by astronauts during a space-shuttle launch.



For exercises 67–70, refer to the bar graphs, which display the top speeds and maximum drops for some of the most popular roller coaster rides.

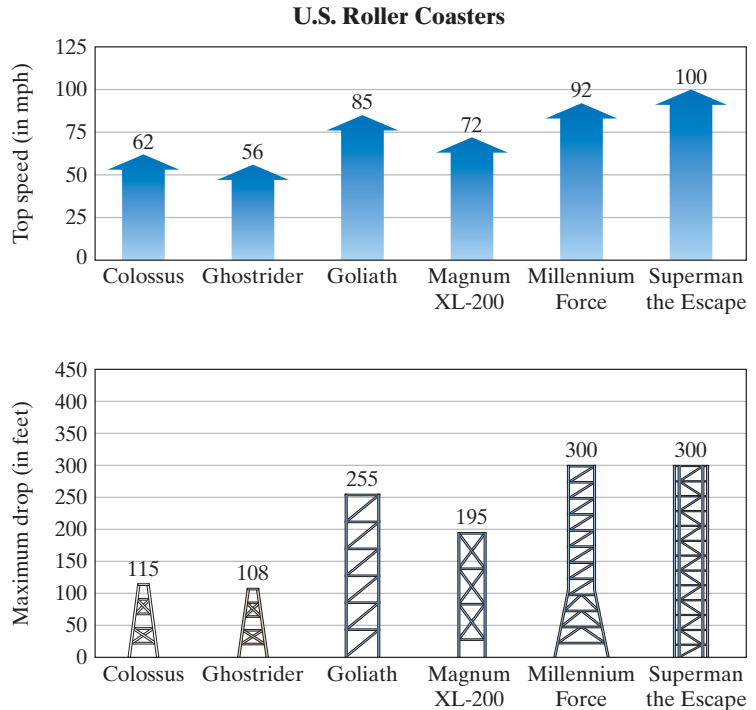
- 67. How much faster is the top speed of Superman the Escape than that of Goliath?
- 68. How much slower is the top speed of Ghostriider than that of Superman the Escape?
- 69. How much less is the maximum drop of Magnum XL-200 than that of Millennium Force?
- 70. How much greater is the maximum drop of Superman the Escape than that of Colossus?

To Think About

- 71. For what value(s) of x and y will $x - y = y - x$?

Translate using symbols, then evaluate.

- 72. Eight minus y , if y is equal to 3



Source: www.ultimaterollercoaster.com

Cumulative Review Replace each question mark with an inequality symbol.

- 73. [1.1.4] 5,117,206 ? 13,842
- 74. [1.1.4] 2,386,702 ? 117,401

Add.

- 75. [1.2.4] **Hours Worked** Edward worked in the supermarket 120 hours in May, 135 in June, and 105 in July. How many hours did he work in the three-month period?
- 76. [1.2.4] **Pet Supply Purchases** Drew bought a dog for \$430. He returned to the store the next day to purchase the following items for the dog: bed, \$32; leash, \$12; dog food, \$28; and dog treats, \$6. How much did Drew pay for the dog and all the supplies?

Quick Quiz 1.3

- 1. Translate the following using numbers and symbols.
 - (a) Five subtracted from a number
 - (b) A number decreased by 7
 - (c) Eight less than a number
- 2. Subtract and check.
 - (a) $14,062 - 7283$
 - (b) $601,307 - 192,512$
- 3. Jose’s salary was \$2860 per month at his former job. His new job pays a salary of \$3270 per month. How much more per month will Jose earn at his new job?
- 4. **Concept Check** Explain why when we subtract $800 - 35$, we change 8 to 7 in the borrowing process.