

**Practice A**

For use with pages 469–474

**Write each power of a ten in decimal form.**

1.  $10^3$

2.  $10^5$

3.  $10^{-2}$

4.  $10^2$

5.  $10^{-3}$

6.  $10^{-1}$

7.  $10^4$

8.  $10^{-5}$

**Rewrite in decimal form.**

9.  $2.03 \times 10^3$

10.  $3.4578 \times 10^4$

11.  $6.43 \times 10^1$

12.  $7.2 \times 10^5$

13.  $5.2 \times 10^0$

14.  $4.68 \times 10^{-2}$

15.  $1.3 \times 10^{-6}$

16.  $8.497 \times 10^{-3}$

17.  $9.8 \times 10^{-4}$

**Rewrite in scientific notation.**

18. 25,000

19. 36.41

20. 4,000,000

21. 564,200

22. 9.32

23. 0.15

24. 0.0083

25. 0.000000718

26. 0.0673

**Evaluate the expression without a calculator. Write the result in decimal form.**

27.  $(2 \times 10^3) \cdot (3 \times 10^8)$

28.  $(3 \times 10^{-4}) \cdot (3 \times 10^{-5})$

29.  $(2 \times 10^{-5}) \cdot (3 \times 10^7)$

30.  $(4 \times 10^{-6}) \cdot (2 \times 10^5)$

31.  $(3 \times 10^6) \cdot (4 \times 10^3)$

32.  $(7 \times 10^{-3}) \cdot (5 \times 10^{-1})$

33.  $(3 \times 10^5) \cdot (8 \times 10^{-2})$

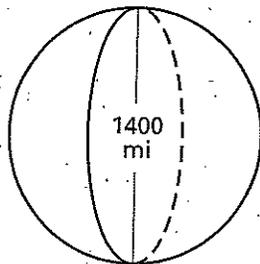
34.  $(12 \times 10^3) \cdot (3 \times 10^{-6})$

35.  $(6 \times 10^{-8}) \cdot (7 \times 10^6)$

**Write the number in scientific notation.**

36. **Earth to Pluto** As the planets orbit the sun, the closest Pluto gets to Earth is approximately 2,700,000,000 miles.

38. **Pluto's Diameter** The diameter of Pluto is approximately 1400 miles. There are 5280 feet in one mile. What is the diameter of Pluto in feet?



37. **Speed of Light** The speed of light in a vacuum is approximately 186,000 miles per second.

39. **Fingernails** Human fingernails grow at a rate of about 0.00286 inch per day.

40. **Television sets** As of 1996, the United States has the most homes with television sets with 95,400,000.

41. **Cells** The human body has  $1 \times 10^{12}$  cells. There are  $3 \times 10^{10}$  red blood cells. Find the ratio of red blood cells to the total number of cells.