

7. ● How many nanoseconds does it take light to travel 1.00 ft in vacuum? (This result is a useful quantity to remember.)
11. ●● **Fill 'er up!** You fill up your gas tank in Europe when the euro is worth \$1.25 and gasoline costs 1.35 euros per liter. What is the cost of gasoline in dollars per gallon? How does your answer compare with the cost of gasoline in the United States? (Use conversion factors in Appendix D.)
15. ● Express each of the following numbers to three, five, and eight significant figures: (a) $\pi = 3.141592654 \dots$, (b) $e = 2.718281828 \dots$, (c) $\sqrt{13} = 3.605551275 \dots$
17. ● An angle is given, to one significant figure, as 4° , meaning that its value is between 3.5° and 4.5° . Find the corresponding range of possible values of (a) the cosine of the angle, (b) the sine of the angle, and (c) the tangent of the angle.