

B Apply

Tell whether you are finding a *percent*, a *part*, or a *base*. Then solve.

31. What is 9% of 56? 32. What percent of 36 is 96? 33. What is 95% of 150?
 34. What is 175% of 64? 35. What percent of 30 is 400? 36. 60 is 250% of what number?

37. **Geography** Water covers approximately 11,800 mi² of Florida, which is about 18% of Florida's area. What is the total area of Florida to the nearest thousand square miles?



38. **Finance** A student has \$1500 to deposit in a savings account. What is the lowest rate that would allow the student to earn \$95 in simple interest in a year?

- (A) 5.5%
 (B) 6.25%
 (C) 6.33%
 (D) 7%

Solve using mental math.

39. 20% of 80 is ? . 40. 120 is 200% of ? . 41. 30 is ? % of 40.

Tell which is greater, *A* or *B*. Assume *A* and *B* are positive numbers.

42. *A* is 20% of *B*. 43. 150% of *A* is *B*. 44. *B* is 90% of *A*.

- (C) 45. **Think About a Plan** The United States Mint reported at the end of 2006 that the unit cost of producing and distributing a penny was 1.21¢. What percent of the value of a penny is this cost? What can you conclude about the cost of making pennies?

- How can a model help you to visualize the problem?
- How can you use a proportion or the percent equation to solve the problem?

46. **Economics** Would you produce an item if the cost of producing and distributing the item were more than 100% of its value? Explain your answer.

- (C) 47. **Error Analysis** A student was asked to make up and solve a percent problem, so the student wrote, "What percent of 1.5 is 3?" and solved it as shown at the right. Describe and correct the error in the student's solution.

- (C) 48. **Writing** Part of a bottle of water has been consumed. Write the steps needed to determine the percent of water that has been consumed.

49. **Finance** A savings account earns simple interest at a rate of 6% per year. Last year the account earned \$10.86 in interest. What was the balance in the account at the beginning of last year?

50. **Furniture** A furniture store offers a set of furniture for \$990. You can also purchase the set on an installment plan for 24 payments of \$45 each. If you choose the installment plan, what percent of the original price will you have paid when you finish? Round to the nearest percent.

$$\begin{array}{l} \frac{a}{b} = \frac{p}{100} \\ \frac{1.5}{3} = \frac{p}{100} \\ 150 = 3p \\ 50 = p \\ 3 \text{ is } 50\% \text{ of } 1.5. \end{array}$$