

Name _____

Analyze Strategies: Solve a Simpler Problem

Use a simpler problem to solve.

1. The apartments in a building are labeled with a number and a letter, such as 2D. The numbers used are 2, 4, 6, and 8, and they are always listed before the letters. The letters used are AA, BB, CC, DD, or EE.

a. Write all the number-letter combinations that start with 2.

b. Write all the number-letter combinations that start with 4.

c. What patterns do you notice? _____

d. How many different number-letter combinations are possible? _____

Use "solve a simpler problem" or any other strategy for each.

2. Four relatives give each other a kiss hello on the cheek. How many kisses are given in all? _____

3. In a bag, there is a quarter, a nickel, and a penny. In another bag, there is a silver dollar and a dime. If a coin is taken from each bag, the amount is recorded, and the coin is returned to the bag, how many different amounts are possible? _____ List them.

4. Cindy, Greg, and Karen swim a total of 32 laps. Cindy swims the most laps. Greg swims 12 laps, which is 16 more than Karen. How many laps did Cindy and Karen swim?

5. At 50 mph, how many hours will it take to travel 150 miles? _____

6. Lizette is having breakfast. She can have eggs and bacon, french toast, or cereal. She can drink milk or juice. How many different combinations of breakfast can she choose from? _____

Answer Key

Analyze Strategies: Solve a Simpler Problem

Use a simpler problem to solve.

1. The apartments in a building are labeled with a number and a letter, such as 2D. The numbers used are 2, 4, 6, and 8, and they are always listed before the letters. The letters used are AA, BB, CC, DD, or EE.

- a. Write all the number-letter combinations that start with 2.

2AA, 2BB, 2CC, 2DD, 2EE

- b. Write all the number-letter combinations that start with 4.

4AA, 4BB, 4CC, 4DD, 4EE

- c. What patterns do you notice? **Possible answer: Each number can be combined with 4 different letters.**
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- d. How many different number-letter combinations are possible?

16

Use "solve a simpler problem" or any other strategy for each.

2. Four relatives give each other a kiss hello on the cheek. How many kisses are given in all?

12

3. In a bag, there is a quarter, a nickel, and a penny. In another bag, there is a silver dollar and a dime. If a coin is taken from each bag, the amount recorded, and the coin is returned to the bag, how many different amounts are possible? **6** List them. **\$0.11, \$0.15**

\$0.35, \$1.01, \$1.05, \$1.25

4. Cindy, Greg and Karen swim a total of 32 laps. Cindy swims the most laps. Greg swims 12 laps, which is 16 more than Karen. How many laps did Cindy and Karen swim?

Cindy swims 16; Karen swims 4

5. At 50 mph, how many hours will it take to travel 150 miles?

3 hours

6. Lizette is having breakfast. She can have eggs and bacon, french toast, or cereal. She can drink milk or juice. How many different combinations of breakfast can she choose from?

6
