

**1-7****Study Guide and Intervention*****Problem-Solving Investigation: Guess and Check***

When solving problems, one strategy that is helpful to use is *guess and check*. Based on the information in the problem, you can make a guess of the solution. Then use computations to check if your guess is correct. You can repeat this process until you find the correct solution.

You can use guess and check, along with the following four-step problem solving plan to solve a problem.

**1 Understand** – Read and get a general understanding of the problem.

**2 Plan** – Make a plan to solve the problem and estimate the solution.

**3 Solve** – Use your plan to solve the problem.

**4 Check** – Check the reasonableness of your solution.

**Example 1**

**SPORTS** Meagan made a combination of 2-point baskets and 3-point baskets in the basketball game. She scored a total of 9 points. How many 2-point baskets and 3-point baskets did Meagan make in the basketball game?

**Understand** You know that she made both 2-point and 3-point baskets. You also know she scored a total of 9 points. You need to find how many of each she made.

**Plan** Make a guess until you find an answer that makes sense for the problem.

**Solve**

Number of 2-point baskets	Number of 3-point baskets	Total Number of Points
1	2	$1(2) + 2(3) = 8$
2	2	$2(2) + 2(3) = 10$
2	1	$2(2) + 1(3) = 7$
3	1	$3(2) + 1(3) = 9$

**Check** Three 2-point baskets result in 6 points. One 3-point basket results in 3 points. Since  $6 + 3$  is 9, the answer is correct.

**Exercise**

**VIDEO GAMES** Juan has 16 video games. The types of video games he has are sports games, treasure hunts, and puzzles. He has 4 more sports games than treasure hunts. He has 3 fewer puzzles than treasure hunts. Use guess and check to determine how many of each type of video game Juan has.