Lesson 3   Reteach

Problem Solving: Estimate or Exact Answer

Estimate or Exact Answer

Sometimes when you solve a problem you need an *exact answer.* Other times you need an *estimate.* Deciding if you need an exact answer or an estimate will help you solve the problem. Let's try an example.

In an hour's time, Leah can make 17 greeting cards. Steven can make 9 cards in the same amount of time. About how many more cards can Leah make than Steven?

Step 1 Understand	What facts do you know? • Leah makes 17 cards in an hour. • Steven makes 9 cards in an hour.
Step 2 Plan	Do you need an *exact* answer to this question? No. When you see *about*, you know that an *estimated* answer is needed.
Step 3 Solve	First, round each number. Leah 17 cards $\longrightarrow$ 20 cards Steven 9 cards $\longrightarrow$ 10 cards Now, subtract both of your rounded numbers. This will give you a final estimate. $$20 - 10 = 10$$ So, Leah can make about 10 more greeting cards in an hour than Steven.
Step 4 Check	Look back at the problem. Since it says "about how many," you know that making an estimate is the correct plan. Notice that since $17 - 9 = 8$, your estimate is very close to the exact answer!

Lesson 3   Reteach

Problem Solving   (continued)

Tell whether an *estimate* or an *exact* answer is needed. Then solve.

1. On Saturday, Zachary's sister worked in the garden and planted 24 flowers. On Sunday, she planted 15 flowers. How many more flowers did she plant on Saturday than on Sunday?

Exact answer. 24 − 15 = 9 flowers

2. The Littleton Public Library gets 37 new magazines and 45 new books every week. In 3 weeks, about how many more books than magazines will they receive?

Estimated answer. About 30 more books than magazines

3. There are enough seats for 55 students on the bus. Can all 35 boys and 28 girls ride the bus? How many more seats are needed for all the students?
Exact answer. No, 35 + 28 = 63; 63 − 55 = 8 more seats are needed.

4. Raul cut 3 pieces of fabric. One piece was 12 inches long and another piece was 41 inches long. What length does Raul need to cut the third piece to have enough fabric for a project that needs 67 inches of fabric? Explain.
Exact answer. 12 + 41 = 53; 67 − 53 = 14. So, Raul needs to cut the third piece of fabric 14 inches long.

5. About how many more minutes did Katie practice her guitar on Monday than on Friday?

Monday	24 minutes
Wednesday	17 minutes
Friday	12 minutes

Estimated answer. About 10 more minutes