Difficult Subtraction Facts

Extend Your Learning
Answers and Explanations

Ms. Jackson surveyed students in third and fourth grade about their pets. Two students in Ms. Jackson's class began a table to show the number of pets for each grade. When the bell rang, only part of the table was done.

1. Complete the table for Ms. Jackson. Use doubles or use ten to help you find the missing values. Describe your reasoning in the last column.

One or two ways to think about each problem are shown in the table. Other ways of thinking are possible.

Kind of Pet	Third Grade	Fourth Grade	Total	Reasoning
Cat	**7**	8	15	**Use Doubles:** 8 + 8 = 16. Since 15 is one less than 16, 8 + 7 = 15. If 8 + 7 = 15, then 15 – 8 = 7. **Use Ten:** 8 + 2 = 10, 10 + 5 = 15. We added 2 and 5, or 7. If 8 + 7 = 15, then 15 – 8 = 7.
Dog	9	7	**16**	**Use Ten:** 9 + 1 = 10, 10 + 6 more = 16. **Use Ten Another Way:** 10 + 7 = 17. Since 9 is one less than 10, 9 + 7 = 16.
Horse	3	**4**	7	**Use Doubles:** 3 + 3 = 6. Since 7 is one more than 6, 3 + 4 = 7. If 3 + 4 = 7, then 7 – 3 = 4.
Fish	**6**	8	14	**Use Doubles:** 8 + 8 = 16. Since 14 is two less than 16, 8 + 6 = 14. If 8 + 6 = 14, then 14 – 8 = 6. **Use Ten:** 8 + 2 = 10, 10 + 4 = 14. We added 2 and 4, or 6. If 8 + 6 = 14, then 14 – 8 = 6.
Hermit Crab	5	**8**	13	**Use Ten:** 13 – 3 = 10, 10 – 2 = 8. We subtracted 3 and 2, or 5. 13 – 5 = 8.
No pet	8	9	**17**	**Use Doubles:** 8 + 8 = 16. Since 9 is one more than 8, 8 + 9 = 17. **Use Ten:** 9 + 1 = 10, 10 + 7 more = 17.

Use the information from the completed table to answer the following questions.

2. How many more hermit crabs are there than horses in the two grades?
There are 13 hermit crabs and 7 horses. To solve this problem, subtract 7 from 13.
Possible Thinking: 7 + 7 =14. Since 13 is one less than 14, 7 + 6 = 13. If 7 + 6 = 13, then 13 – 7 = 6.
There are six more hermit crabs than horses.

3. There are a total of 47 students in fourth grade. How many fourth grade students have at least one pet?
   Nine fourth grade students do not have a pet. To find the number of students that do have a pet, subtract 9 from 47.
   Possible Thinking: 47 – 10 = 37. Ten is one more than 9, so we've subtracted one too many. 37 + 1 = 38. Thirty-eight fourth grade students have at least one pet.

4. What is the total number of dogs and cats?
   There are 15 dogs and 16 cats. To find the total, add 15 and 16.
   Possible Thinking: 15 + 15 = 30. Since 16 is one more than 15, 15 + 16 = 31.
   There are a 31 dogs and cats.

Solve the following problems mentally. Write your answer in the first column and describe your thinking in the second column. Use doubles or multiples of ten to help. The first problem is done for you.

5.	72 - 35 = **37**	**Use Doubles:** 35 + 35 = 70. Since 72 is two more than 70, 35 + 37 = 72. If 35 + 37 = 72, then 72 – 35 = 37.
6.	32 - 15 = **17**	**Use Doubles:** 15 + 15 = 30. Since 32 is two more than 30, 15 + 17 = 32. If 15 + 17 = 32, then 32 – 15 = 17.
7.	133 - 99 = **34**	**Use a Multiple of 10:** 133 – 100 = 33. We subtracted one too many, so the answer is one more. 133 – 99 = 34. **Another Way to Use a Multiple of 10:** 99 + 1 = 100, 100 + 33 = 133. We added 1 and 33, or 34, so 133 – 99 = 34.
8.	51 - 25 = **26**	**Use Doubles:** 25 + 25 = 50. Since 51 is one more than 50, 25 + 26 = 51. If 25 + 26 = 51, then 51 – 25 = 26.
9.	124 – 26 = **98**	**Use a Multiple of 10:** 124 – 24 = 100, 100 – 2 = 98.
10.	85 – 16 = **69**	**Use a Multiple of 10:** 85 – 15 = 70. 70 – 1 = 69
11.	53 - 25 = **28**	**Use Doubles:** 25 + 25 = 50. Since 53 is three more than 50, 25 + 28 is 53. If 25 + 28 = 53, then 53 – 25 = 28.
12.	92 – 33 = **59**	**Use a Multiple of 10:** 92 – 32 = 60. 60 -1 = 59.