PROBLEM SOLVED
MAKING SENSE OF MATHEMATICS

Difficult Subtraction Facts
A Closer Look at the Video

After watching the *Difficult Subtraction Facts* video, make sense of the mathematics by taking a closer look at the problem situations and solutions. Use the comments and questions in bold to help you solve the problems and develop efficient thinking strategies for the difficult subtraction facts.

Understanding how addition and subtraction are related can help you develop strategies for solving subtraction problems. When solving both addition and subtraction problems, you have a whole and two parts. If you know the two parts, you can add to find the whole.

Part + Part = Whole

If you know the whole and one part, you can subtract to find the other part.

Whole – Part = Part

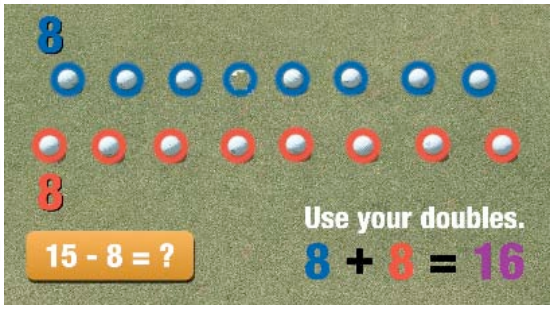
Because addition and subtraction are related, you can use your knowledge of addition to solve subtraction problems. One strategy is to use addition doubles like 5 + 5 = 10 or 30 + 30 = 60. A second strategy is to use tens, numbers that add to ten or a multiple of ten, like 8 + 2 or 29 + 1. Both strategies can help you quickly find answers to problems involving the basic subtraction facts and problems involving larger numbers.

Problem 1: Dave had $15.00 and he spent $8.00 on hot dogs. How much money does he have left?

What subtraction problem do you need to solve to find how much money Dave has left?
15 – 8 = ?

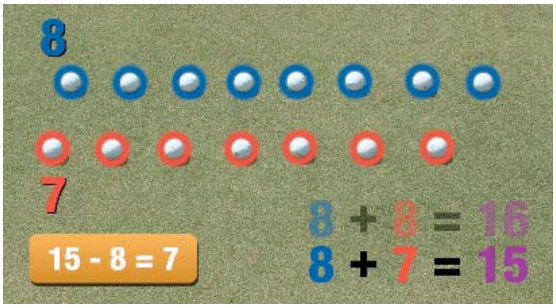
Strategy 1: Use doubles
How can you use addition doubles to solve this problem?

Possible Thinking: I know that 8 + 8 = 16, but I only have 15.



15 is one less than 16.
8 + 7 is one less than 8 + 8, so
8 + 7 = 15.

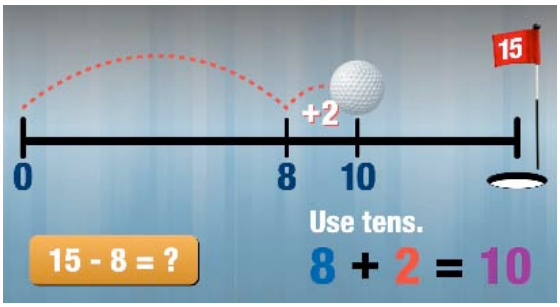
The whole is 15 and the parts are 8 and 7.
If 8 + 7 = 15, then
15 – 8 = 7.



Fifteen dollars minus eight dollars is seven dollars.

MakingSense

Strategy 2: Use tens
How can you use ten to solve this problem?

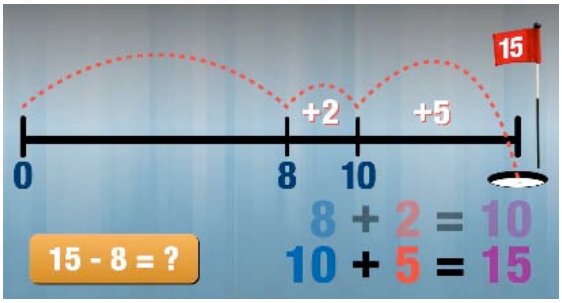


Possible Thinking: I know that 8 + 2 equals 10.

I need 5 more to equal 15.

10 + 5 = 15

I began with 8, added 2, and then added 5 more.
2 + 5 = 7, so I added 7.
8 + 7 = 15



The whole is 15 and the parts are 8 and 7.
If 8 + 7 = 15, then
15 – 8 = 7

Fifteen dollars minus eight dollars is seven dollars.

When you use tens to solve a subtraction problem, you are adding up to reach the whole, in this case 15. The amount you add to reach the whole, 7, is the missing part of the subtraction problem.

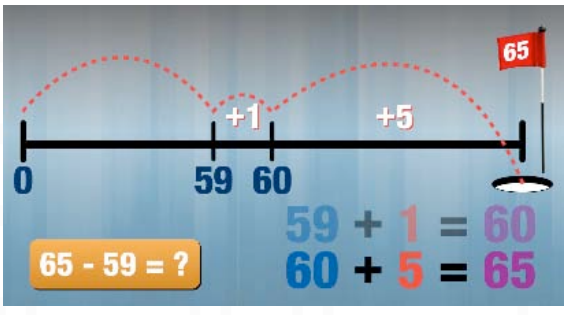
Problem 2: Describe a way to solve 65 - 59 mentally.

How can you use ten to solve this problem mentally?

Possible Thinking: I know that 59 + 1 equals 60 and 60 + 5 = 65.

I began with 59, added 1, and then added 5 more.
1 + 5 = 6, so I added 6.

59 + 6 = 65, so 65 – 59 = 6.



Note: The number line is not drawn to scale.

Addition and subtraction are related. Use the addition facts you know, doubles and tens, to determine answers to subtraction facts. These strategies are accurate and efficient for the basic facts, and you can use similar thinking to mentally calculate answers to problems with larger numbers.