

Mystery Number Game



Figure 1: A clear, friendly illustration for a worksheet about Addition and subtraction within 100, showing the objects and situation the exercises

Students investigate addition and subtraction within 100 by finding a hidden number using clues ([Outcome](#)). This puzzle builds on the understanding that a sum can be composed in multiple ways ([Understanding](#)) and that addition strategies for two-digit numbers include making multiples of ten ([Knowledge](#)). Students determine a missing quantity using a variety of strategies ([Skills](#)).

The puzzle

A number is hiding. Read each clue carefully. What is the mystery number?

Clue 1: If you add 20 to the mystery number, you get 65.

Clue 2: If you subtract 15 from the mystery number, you get 30.

Clue 3: The mystery number is 10 more than 35.

Only one number works for all three clues. What is it?

Hints

Hint 1: Start with Clue 3. A sum can be composed in multiple ways. Then check if that number works with Clues 1 and 2.

Hint 2: If the mystery number plus 20 equals 65, work backwards. What number plus 20 makes 65? Count up from 20 to 65. Or think about what to add to 20 to reach 65.

Hint 3: Try the number 45. Does $45 + 20 = 65$? Does $45 - 15 = 30$? Does 45 = 10 more than 35?

Answer key

The mystery number is 45.

Why it works:

Clue 1: $45 + 20 = 65$ '

Clue 2: $45 - 15 = 30$ '

Clue 3: $45 = 35 + 10$ '

All three clues match. The answer is 45.

Teaching notes: Students may solve this by working backwards from any clue. Or they may test the number from Clue 3 against the others. Both strategies show understanding of addition and subtraction within 100. Encourage students to verify their answer using inverse operations. Inverse operations means using the opposite operation. If $45 + 20 = 65$, then $65 - 20$ should equal 45.