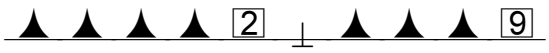
# Sample Solutions to Verbal Problems Using Hands-On Equations®

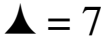
In order to solve a verbal problem using **Hands-On Equations®**, we need to determine what we want the blue pawn to represent. This decision is made after carefully reading the problem. In the first example below, the choice is clear.

## Sample #1. Four times a number, increased by 2, is the same as three times the number, increased by 9. Find the number.

*We let the blue pawn represent the unknown number. We then proceed to set up the game pieces to represent the problem, and then we go on to solve using our legal moves.*

Let the number be: ♟





Answer: The number is 7. Check: 30 = 30

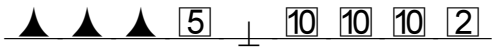
## Sample #2. Evan is 5 years older than twice the age of his younger brother, Jimmy. Together, their ages add up to 32. How old is each?

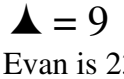
*It is logical to let the blue pawn represent Jimmy's age, since Jimmy is the point of reference in the problem. Once we represent Jimmy's age by a blue pawn, we can reason out that Evan's age is represented by two blue pawns and a 5-cube We are then in a position to represent and solve the problem using our game pieces.*

Let Jimmy's age be: ♟

Then, Evan's age is:

Then, we have





Answer: Jim is 9; Evan is 23. Check: 32 = 32

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