

## Solving One-Step Equations on the ISEE All Levels

LESSON GOAL: Learn a foolproof way to solve any one-step equation on the ISEE.

**ISEE Question:** When a number is tripled, the result is fifteen. What is twice the number?

- (A) 3
- (B) 5
- (C) 7
- (D) 10

**Solution:** Let's focus on the only two "mathematical" words in the first sentence: "**tripled**" and "**fifteen.**"

STEP 1: To **translate** the sentence into a **mathematical equation**, we can use "b" as for the unknown **variable** ("a number," the problem calls it), and remember that "**is**" means "=". Our equation will read " **$3b = 15$** ".

STEP 2: Now, you probably already figured out that  $3 \times 5 = 15$  and, therefore, our number  $b = 5$ . But if the equation were a bit more complicated, say " $7b = 12$ ", then you'd have to **isolate** the b by dividing by 7 on both sides. The result will be

$$b = \frac{12}{7} = 1 \frac{5}{7}$$

STEP 3: If you already picked B), you fell into one of the most common ISEE traps: picking the correct answer to the question you *thought* you were given and not to the question you were *actually* given. In this case, we are looking for "**twice the number,**" so the answer is  $5 \times 2 = 10$ , or D).

**Helpful Tip:** Always circle what the question is asking for when you first read it (in this case, the words "twice the number") and have a look at that again before you bubble in your answer choice.