

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 $3 \ge 5 = 15$ 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.