

Topic 1.1: Introduction to Algorithms, Programming, and Compilers

LO: 1.1.A, 1.1.B, 1.1.C | Skill: 1.A | Scenario: Algorithms in everyday life — then your first Java program

Exit Ticket — Topic 1.1

Answer on your own. 5 minutes.

1. In one sentence, what is an algorithm?

Answer: A step-by-step process for completing a task or solving a problem.

2. A program compiles and runs, but prints 16 bottles when there are only 12 hikers. Name the error type and how a programmer would find it.

Answer: A logic error; found by testing — comparing the output to a value you know is reasonable (12 hikers should not need 16 bottles).

3. A program stops with an error message partway through running (for example, it divides by zero). What error type is this, and why did the compiler not catch it?

Answer: A run-time error (an exception). The compiler cannot tell the divisor will be zero until the program actually runs, so it only fails during execution.