

Multiple-Choice Quiz — Week 2

Basic Java Types · for reference: Week 1

Question 1. What is the result of `9 % 2` in Java?

- ☐ A) 4
- ☐ B) 4.5
- ☐ C) 1
- ☐ D) 0

Question 2. Which of these is a valid Java identifier (variable name)?

- ☐ A) 1stPlace
- ☐ B) my-var
- ☐ C) total3
- ☐ D) class

Question 3. Which naming convention does Java use for constants?

- ☐ A) lowerCamelCase
- ☐ B) UpperCamelCase
- ☐ C) SCREAMING_SNAKE_CASE
- ☐ D) snake_case

Question 4. How should you compare the **contents** of two `String` variables, `s1` and `s2`?

- ☐ A) `s1 == s2`
- ☐ B) `s1.equals(s2)`
- ☐ C) `s1 = s2`
- ☐ D) `s1.compare(s2)`

Question 5. Due to 8-bit integer overflow, beating level 255 in the classic arcade game Pac-Man makes the level counter wrap around to this level.

- ☐ A) 0
- ☐ B) 256
- ☐ C) -1
- ☐ D) 128

Question 6. What is the value of `(int) 9.99` in Java?

- ☐ A) 10
- ☐ B) 9
- ☐ C) 9.99
- ☐ D) Compile error

Question 7. Which expression correctly converts the `String` `"42"` into an `int`?

- ☐ A) `(int) "42"`
- ☐ B) `Integer.parseInt("42")`
- ☐ C) `"42".toInt()`
- ☐ D) `int.parse("42")`

Question 8. What does `System.out.println(0.1 + 0.2 == 0.3)` print in Java?

- ☐ A) true
- ☐ B) false
- ☐ C) Compile error
- ☐ D) 0.3

Question 9. What is the deadline for submitting a weekly assignment?

- ☐ A) Friday 23:59
- ☐ B) Saturday 12:00
- ☐ C) Sunday 23:59
- ☐ D) Monday 09:00

Question 10. After running `javac Main.java` successfully, which new file appears?

- ☐ A) `Main.exe`
- ☐ B) `Main.class`

☐ C) Main.jar

☐ D) No new file appears

Question 11. Before it was renamed for trademark reasons, Java's original name was this.

☐ A) Oak

☐ B) Coffee

☐ C) Espresso

☐ D) Duke

Question 12. According to computing folklore, the term "bug" for a software problem got its famous origin story after this happened in 1947.

☐ A) A real moth got stuck in a computer relay

☐ B) A programmer spilled coffee on a punch card

☐ C) A cat chewed through a cable

☐ D) A software company added it as an April Fools' joke

Answer Key — Week 2 Quiz

Concept tested in *italics*.

- Q1 C** *Modulus.* % returns the remainder of the division: $9 / 2 = 4$ remainder 1.
- Q2 C** *Identifiers.* Identifiers cannot start with a digit or contain -, and cannot be a reserved keyword like class. total3 is the only valid one.
- Q3 C** *Naming conventions.* Java uses SCREAMING_SNAKE_CASE for constants, lowerCamelCase for variables, and UpperCamelCase for classes.
- Q4 B** *String equality.* equals() compares contents. == compares references (whether the two variables point to the exact same object) and can give surprising results with String.
- Q5 A** *Integer overflow.* An 8-bit integer's maximum value is 255; adding 1 overflows and wraps back around to 0 — a famous glitch nicknamed “Level 256” even though the counter itself reads 0.
- Q6 B** *Casting truncates.* (int) on a double drops the fractional part rather than rounding: (int) 9.99 is 9, not 10.
- Q7 B** *String-to-number conversion.* Integer.parseInt converts a String to an int. There is no toInt() method on String, and (int) is a cast between numeric types, not from String.
- Q8 B** *Floating-point precision.* double cannot represent 0.1 and 0.2 exactly, so their sum is a hair off from 0.3 — a classic gotcha that trips up almost every language, not just Java.
- Q9 C** *Course formalities.* Weekly assignments are due every Sunday at 23:59.
- Q10 B** *Compiling.* javac compiles Main.java into the bytecode file Main.class, which is then run with java Main.
- Q11 A** *Java trivia.* Java was originally called Oak, named after a tree outside creator James Gosling's office, before being renamed for trademark reasons.
- Q12 A** *CS history.* In 1947, Grace Hopper's team found a moth trapped in a relay of the Harvard Mark II computer and taped it into the logbook — the famous origin story for the term “bug.”