1. Choosing which code to run based on a condition is called...

   ☐ sequence

   ☐ selection

   ☐ repetition

   ☐ an error

2. Which operator tests whether two values are equal?

   ☐ !=

   ☐ <=

   ☐ =

   ☐ ==

3. In an if-else statement, how many of the two branches run?

   ☐ neither

   ☐ it depends on braces

   ☐ both

   ☐ exactly one

4. In an else-if ladder, which condition's block runs?

   ☐ the shortest one

   ☐ the first one that is true

   ☐ all true ones

   ☐ the last one that is true

5. a && b is true when...

   ☐ neither is true

   ☐ a is false

   ☐ both a and b are true

   ☐ at least one is true

6. int i=1, sum=0; while (i<=5){ sum+=i; i++; } What is sum at the end?

   _____

exercises.lol exercises.com.cn

   _____

8. Putting the accumulator's initialization inside the loop resets it every pass.

   ☐ True ☐ False

9. How many characters does a loop visit for the String "HELLO" (using i < length())?

   _____

10. For n = 1000, about how many steps is an n^2 algorithm (in millions)?

    _____

1. **selection**

   Selection (if) picks a path; repetition (loops) repeats a block.

2. **==**

   == tests equality; = assigns.

3. **exactly one**

   Exactly one branch runs based on the condition.

4. **the first one that is true**

   Java takes the first true condition top to bottom.

5. **both a and b are true**

   && (AND) needs both operands true.

6. **15**

   1+2+3+4+5 = 15.

7. **5**

   i takes 0,1,2,3,4 → 5 passes.

8. **True**

   Initialize before the loop, not inside it.

9. **5**

   Indices 0..4 → 5 characters.

10. **1**

    1000^2 = 1,000,000 = 1 million.

exercises.lol exercises.com.cn