Quad:

Trap.

Parallel.

Rect.

Sqr.
preconditions - true prior to a method execution
postconditions - true after execution of a method

use exceptions to protect preconditions
// preconditions: age >= 0
public int setAge(int age) {
    if (age < 0) {
        throw new IllegalArgumentException("Age must be >= 0");
    }
    this.age = age;
}

public void someMethod() {
    try {
        emp.setAge(x);
    } catch (IllegalArgumentException iae) {
    }
}
Casting

Quad[] shapes = ... 
shapes[0] = new Square(...);

for (Quad q : shapes) {
    if (q instanceof Square) {
        Square s = (Square) q;
    }
}

For (int i = 0; i < shapes.length; i++)
    Quad q = shapes[i];
while (! done)
{
    System.out.println("next");
    Check Done();
}