



Progress Check

1. Show the two forms of static import.
2. Show how to import **Thread**'s **sleep()** method so that it can be used without being qualified by **Thread**.
3. Static import works with methods, but not variables. True or False?
4. An annotation begins with a/an _____.



Module 12 Mastery Check

1. Enumeration constants are said to be *self-typed*. What does this mean?
2. What class do all enumerations automatically inherit?
3. Given the following enumeration, write a program that uses **values()** to show a list of the constants and their ordinal values.

```
enum Tools {
    SCREWDRIVER, WRENCH, HAMMER, PLIERS
}
```

4. The traffic light simulation developed in Project 12-1 can be improved with a few simple changes that take advantage of an enumeration's class features. In the version shown, the duration of each color was controlled by the **TrafficLightSimulator** class by hard-coding these values into the **run()** method. Change this so that the duration of each color is stored by the constants in the **TrafficLightColor** enumeration. To do this, you will need to add a constructor, a private instance variable, and a method called **getDelay()**. After making these changes, what improvements do you see? On your own, can you think of other improvements? (Hint: try using ordinal values to switch light colors rather than relying on a **switch** statement.)
5. Define boxing and unboxing. How does autoboxing/unboxing affect these actions?

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1. `import static pkg.type-name.static-member-name;`
`import static pkg.type-name.*;`
 2. `import static java.lang.Thread.sleep;`
 3. False.
 4. `@`

6. Change the following fragment so that it uses autoboxing.

```
Short val = new Short(123);
```

7. In your own words, what does static import do?

8. What does this statement do?

```
import static java.lang.Integer.parseInt;
```

9. Is static import designed for special-case situations, or is it good practice to bring all static members of all classes into view?

10. An annotation is syntactically based on a/an _____ .

11. What is a marker annotation?

12. An annotation can be applied only to methods. True or False?