

## Quiz 8 Answers

1. What is `this`?

A pointer to the object that called a method.

2. What is a destructor?

A special method called when an object is about to be destroyed. Typically deletes any dynamic storage owned by the object.

3. Write the method header for the destructor for class `Widget`.

```
Widget::~~Widget()
```

4. Write the method header for the copy constructor for class `Widget`.

```
Widget::Widget(const Widget& other)
```

5. Write the method header for the overloaded assignment operator for class `Widget`.

```
Widget& Widget::operator=(const Widget& other)
```

6. What are three situations where a copy constructor may be called?

- When a new object is created and initialized with an existing object of the same class.
- When an object is passed by value.
- When an object is returned by value.

7. What is the logic for an overloaded assignment operator?

- Check for self-assignment. If so, skip to last step.
- Delete dynamic storage for left object.
- Copy non-dynamic data members.
- Allocate new dynamic storage for left object.
- Copy contents of dynamic storage.
- `return *this;`