4.5 (Keyword **new**) What is the purpose of operator new? Explain what happens when this key-word is used in an application.

New creates a new object of the specified class.

4.6 (Default Constructor) What is a default constructor? How are an object’s instance variables initialized if a class has only a default constructor?

Each class you declare optionally can provide a constructor with parameters that can be used to initialize an object when it’s created.

Objects instance variables are initialized as an object instance variable.

4.7 (Instance Variable) Explain the purpose of instance variable.

The instance variable is a property which is the underlying data which server a purpose of distinct identifiers.

4.8 (Properties) Explain why a class might provide a property for an instance variable.

The class could provide an instance variable an property since it could work with multiple instances. That would require multiple properties to hold all that instances used within a class.