06 Quiz 1 - AR

1. Select the four (4) statements that can be inserted at line n1. (3 pts. each)

```java
public class Employee {
    public int salary;
}
public class Manager extends Employee {
    public int budget;
}
public class Director extends Manager {
    public int stockOptions;
}
public class Main {
    public static void main(String[] args) {
        Employee employee = new Employee();
        Manager manager = new Manager();
        Director director = new Director();
        // line n1
    }
}
```

Answer: Line n1 can include the following four legitimate statements:

- employee.salary = 50000;
- director.salary = 80000;
- manager.budget = 100000;
- director.stockOptions = 1000;

2. Will the code compile? If yes, determine the output. If no, state why. (3 pts.)

```java
class Pet {
    public Pet(int age) {
        System.out.print("Pet");
    }
}
public class Cat extends Pet {
    public Cat() {
        System.out.print("Cat");
    }

    public static void main(String[] args) {
        new Pet(5);
    }
}
```

Answer: The code won't compile is the right response.

The code won't compile as the Cat class fails to provide an integer parameter when calling the Pet constructor, which is necessary. Java's default attempt to invoke a no-argument super() results in a compilation error since Pet only has a constructor with an integer parameter.