

Name _____ Period _____

Skill 24.2: Exercise 1	
The MyCar class below extends the Car class. For each line of code indicated with a letter (A – E), indicate whether the statement is valid or invalid. If it is invalid, indicate why.	
<pre>public abstract class Car{ private int year = 2015; private String model = "Landcruiser"; (A) public abstract String getMake(); (B) public abstract int getYear(){ return year; } (C) public String model(){ return model; } }</pre>	<pre>public class MyCar extends Car{ public static void main(String args[]){ (D) Car newCar = new Car(); } (E) public String getMake(){ return "Toyota"; } }</pre>
(A) (B) (C) (D) (E)	

Skill 24.2: Exercise 2	
(a) Declare an abstract class Insect. Then declare another class called Bee which inherits Insect. (b) Declare a method in the Insect class called getLegs(), which returns the number of legs as an int. (c) Declare a Boolean abstract method in the Insect class called canFly() (d) In the Bee class, implement the canFly method (e) Write the main class and in the main class instantiated a Bee object, then call getLegs() and canFly()	

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Skill 24.4: Exercise 1

- (a) Declare an interface called `Animal`
- (b) Declare a class called `Ant` that implements `Animal`

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Skill 24.4: Exercise 2

Consider the animal interface below. The Unicorn and Dinosaur classes implement the `Animal` interface. Write the Unicorn and Dinosaur classes.

```
public interface Animal {  
  
    //All the methods below are abstract  
    void setAge(int a);  
    void setType(String t);  
    boolean getEats();  
    String getAnimalInfo();  
}
```

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Write a new class called `Brontosaurus` that extends the `Dinosaur` class.

- `Brontosaurus`es are vegetarians so you need to override the `getEats` method to return `false`.
- Write the `getAnimalInfo` method that overrides the `getAnimalInfo` in the `Dinosaur` class

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AP Computer Science A
Ticket Out the Door
Set 24: Abstract Classes and Interfaces

Name _____ Period _____

Complete the Zoo class below. In the Zoo class,

- Create a Rainbow Unicorn that is 400 years old.
- Create a Brontosaurus Dinosaur that is 80 years old.
- Print the getEats method for both the animals. What is printed?
- Print the getAnimalInfo method for both animals. What is printed?