

CSSE 220 – Object-Oriented Software Development
Rose-Hulman Institute of Technology

Worksheet Polymorphic Practice

```
abstract class Pet {  
    public void speak() {  
        System.out.print("Pet ");  
        sound();  
    }  
    public abstract void sound();  
}  
class Dog extends Pet {  
    public void sound() {  
        System.out.print("Woof ");  
    }  
}  
class Cat extends Pet {  
    public void sound() {  
        System.out.print("Meow ");  
    }  
}  
1.  }
```

Pet a = new Dog();
Pet b = new Cat();
Dog c = new Dog();

a.speak(); _____

b.speak(); _____

c.speak(); _____

a.sound(); _____

b.sound(); _____

```

abstract class Animal {
    public void speak() {
        System.out.print("Animal ");
        makeSound();
    }
    public abstract void makeSound();
}
class Dog extends Animal {
    public void makeSound() {
        System.out.print("Woof ");
    }
    public void fetch() {
        System.out.print("Fetch ");
    }
}
class Cat extends Animal {
    public void makeSound() {
        System.out.print("Meow ");
    }
}
2.

```

```

Animal a = new Dog();
Animal b = new Cat();
Dog c = new Dog();

```

a.speak(); _____

b.speak(); _____

a.makeSound(); _____

c.fetch(); _____

a.fetch(); _____

((Dog) a).fetch(); _____

((Dog) b).fetch(); _____

Animal d = c;

Dog e = a;