Example: Consider the following program with five classes and one interface. The corresponding class diagram is shown on the last page.

```
public interface IBook {
	public abstract void setPages(int pages);
	public abstract int getPages();
}

public class Book implements IBook {
	protected int pages = 1500;
	private Publisher publisher;

	public Book(Publisher publisher) {
		this.publisher = publisher;
	}

	public Book(Publisher publisher, int pages) {
		this.publisher = publisher;
		this.pages = pages;
	}

	public void setPages(int numPages) {
		pages = numPages;
	}

	public int getPages() {
		return pages;
	}

	public Publisher getPublisher() {
		return publisher;
	}

	public void setPublisher(Publisher publisher) {
		this.publisher = publisher;
	}
}

public class Dictionary extends Book {
	private int definitions = 52500;

	public Dictionary(Publisher publisher) {
		super(publisher);
	}

	public Dictionary(Publisher publisher, int pages) {
		super(publisher, pages);
	}

	public Dictionary(Publisher publisher, int pages, int definitions) {
		super(publisher, pages);
		this.definitions = definitions;
	}

	public double computeRatio() {
		return definitions/pages;
	}

	public void setDefinitions(int numDefinitions) {
		definitions = numDefinitions;
	}

	public int getDefinitions() {
		return definitions;
```

```
	}
}

public class Publisher {
	private String name;
	private Address address;

	public Publisher(String name, Address address) {
		this.name = name;
		this.address = address;
	}

	public String getName() {
		return name;
	}

	public Address getAddress() {
		return address;
	}
}

public class Address {
	private String streetAddress, city, state;
	private long zipCode;

	public Address(String street, String town, String st, long zip) {
		streetAddress = street;
		city = town;
		state = st;
		zipCode = zip;
	}

	public String toString() {
		String result;
		result = streetAddress + "\n";
		result += city + ", " + state + " " + zipCode;
		return result;
	}
}

public class Words {
	public Words() {}

	public static void main(String[] args) {
		Dictionary webster = new Dictionary();
		System.out.println("Number of pages: " +
		webster.getPages());
		System.out.println("Number of definitions: " +
		webster.getDefinitions());
		System.out.println("Definitions per page: " +
		webster.computeRatio());
	}
}
```