public class Shape {

// Instance variables

private int numSides;

private boolean regular;

// Constructor 1: Default constructor

public Shape() {

this.numSides = 0;

this.regular = false;

}

// Constructor 2: Parameterized constructor

public Shape(int numSides, boolean regular) {

this.numSides = numSides;

this.regular = regular;

}

// Getter methods

public int getNumSides() {

return numSides;

}

public boolean isRegular() {

return regular;

}

// Setter methods

public void setNumSides(int numSides) {

this.numSides = numSides;

}

public void setRegular(boolean regular) {

this.regular = regular;

}

}

2. public class Animal {

int weight, height; // \*Instance variables\*

double speed; // \*Instance variable\*

// [Constructor]

Animal() {

weight = 50;

height = 4;

speed = 2; // miles per hour

}

// [Constructor]

Animal(int w, int h, int s) {

weight = w;

h = height;

speed = s;

}

// Circle Method Signature ⭕

// ⬇

public double getTime(double miles) {

return miles / speed; // gets the number of hours to go these miles

}

// Circle Method Signature ⭕

// ⬇

public int getWeight() {

return weight;

}

// Circle Method Signature ⭕

// ⬇

public int getHeight() {

return height;

}

// Circle Method Signature ⭕

// ⬇

public double getSpeed() {3. public class Main {

public static void main(String[] args) {

// Creating instances of Animal class

Animal animal1 = new Animal(); // Using default constructor

Animal animal2 = new Animal(60, 5, 3); // Using parameterized constructor

// Printing the speeds of animals

System.out.println("Animal #1 has a speed of " + animal1.getSpeed() + ".");

System.out.println("Animal #2 has a speed of " + animal2.getSpeed() + ".");

}

}

return speed;

}

}

4. public class Student {

// Instance variables

private String name;

private int credits;

private double gpa;

private double qualityPoints;

// Constructor method

public Student(String name, int credits, double qualityPoints) {

this.name = name;

this.credits = credits;

this.qualityPoints = qualityPoints;

this.gpa = calculateGPA();

}

// Method to calculate GPA

public double calculateGPA() {

if (credits == 0) {

return 0.0;

}

return qualityPoints / credits;

}

// Method to update credits and quality points

public void updateGPA(int newCredits, double newQualityPoints) {

this.credits += newCredits;

this.qualityPoints += newQualityPoints;

this.gpa = calculateGPA();

}

// Getter methods

public String getName() {

return name;

}

public int getCredits() {

return credits;

}

public double getGPA() {

return gpa;

}

public double getQualityPoints() {

return qualityPoints;

}

}

5. public class Main {

public static void main(String[] args) {

// Creating instances of Student class

Student mary = new Student("Mary Jones", 14, 46);

Student john = new Student("John Stiner", 60, 173);

Student ari = new Student("Ari Samala", 31, 69);

}

}

6.