**Problem11:**The Planet Explorer\*\*

You are a scientist at a space research center. The center is currently researching various planets and their properties. One of the properties they are interested in is the surface area of these planets. Considering that a planet can be approximated as a sphere, your task is to create a method that calculates the surface area of a sphere given its radius.

**Solution:**

**package** problem11;

**public** **class** PlanetExplore {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

PlanetExplorer explorer = **new** PlanetExplorer();

System.***out***.printf("%.2f",explorer.calculateSurfaceArea(3.0));

}

}

**package** problem11;

**public** **class** PlanetExplorer {

**public** **double** calculateSurfaceArea(**double** radius) {

**return** 4\*Math.***PI***\*Math.*pow*(radius, 2);

}

}

**Output:**

113.10

**Problem12:**The Height Converter\*\*

You are part of a sports data management team. The team is developing a new feature for their application where the heights of players, currently recorded in inches, need to be displayed in feet for an international audience. Your task is to create a method that takes a height given in inches and converts it into feet.

**Solution:**

**package** problem12;

**public** **class** HeightConverter {

**public** **double** convertInchesToFeet(**double** inches) {

**return** inches/12;

}

}

**package** problem12;

**public** **class** HeightConvertApp {

**public** **static** **void** main(String[] args) {

HeightConverter converter = **new** HeightConverter();

System.***out***.printf("%.2f",converter.convertInchesToFeet(72.0));

}

}

**Output:**

6.00

**Problem13:**The Finance Calculator\*\*

You are a software developer at a financial technology company. The company is building a new feature in their app that calculates the simple interest for users wanting to take out loans. Your task is to create a method that calculates the simple interest given the principal amount, rate of interest, and time.

**Solution:**

**package** peoblem13;

**public** **class** FinanceCalculatorApp {

**public** **static** **void** main(String[] args) {

FinanceCalculator calculator = **new** FinanceCalculator();

System.***out***.printf("%.2f",calculator.calculateSimpleInterest(1000.0, 0.05, 2.0));

}

}

**package** peoblem13;

**public** **class** FinanceCalculator {

**public** **double** calculateSimpleInterest(**double** principal, **double** rate, **double** time) {

**return** principal\*rate\*time;

}

}

**Output:**

100.00

**Problem14:**Time Converter\*\*

You are developing a time tracking application for a company. The employees log their time in minutes. The management wants to see these durations in hours for better understanding. Your task is to write a function that can convert minutes into hours.

**Solution:**

**package** problem14;

**public** **class** TimeConverter {

**public** **static** **void** main(String[] args) {

System.***out***.println(*convertToHours*(90));

}

**public** **static** **double** convertToHours(**int** minutes) {

**return** minutes/60.0;

}

}

**Output:**

1.5

**Problem15:** Halve It\*\*

You are helping a friend in developing a financial app. The app has a feature where it calculates half of the entered amount for splitting bills. Your task is to write a function that takes a number and returns its half.

**Solution :**

**package** problem15;

**public** **class** HalveIt {

**public** **static** **void** main(String[] args) {

System.***out***.printf("%.2f",*halveTheNumber*(150.00));

}

**public** **static** **double** halveTheNumber(**double** num) {

**return** num/2;

}

}

**Output:**

75.00