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CST-105

Program Excercises

Ch.1

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Ch.1.4

public static void main(String[] args) {

System.out.println("a a^2 a^3");

System.out.println("1 1 1");

System.out.println("2 4 8");

System.out.println("3 9 27");

System.out.println("4 16 64");

Ch. 1.7

public class one\_seven

{

public static void main(String[] args)

{

System.out.print("This will print 1st approximation: ");

System.out.println(4\*(1.0-(1.0/3)+(1.0/5)-(1.0/7)-(1.0/11)));

System.out.print("This will print 2nd approximation: ");

System.out.println(4\*(1.0-(1.0/3)+(1.0/5)-(1.0/7)-(1.0/11)+(1.0/13)));

}

}

1.8

public class Ex01\_08 {

public static void main(String[] args) {

System.out.println("Radius of circle = 5.5");

System.out.println("Perimeter = 2 x radius x pi = " + 2 \* 5.5 \* Math.PI);

System.out.println("Area = radius x radius x pi = " + 5.5 \* 5.5

\* Math.PI);

1.10

public class Exercise\_10 {

public static void main(String[] strings) {

double kilometers = 14.0;

double miles = kilometers / 1.6;

double rate = (45.5 \* 60.0 + 30.0) / (60.0 \* 60.0);

double milesPerHour = miles / rate;

System.out.println(milesPerHour);

}

}

Ch. 1.11

public class Exercise\_11 {

public static void main(String[] strings) {

double birthRateInSeconds = 7.0;

double deathRateInSeconds = 13.0;

double newImmigrantInSeconds = 45.0;

double currentPopulation = 312032486;

double secondsInYears = 60 \* 60 \* 24 \* 365;

double numBirths = secondsInYears / birthRateInSeconds;

double numDeaths = secondsInYears / deathRateInSeconds;

double numImmigrants = secondsInYears / newImmigrantInSeconds;

for (int i = 1; i <= 5; i++) {

currentPopulation += numBirths + numImmigrants - numDeaths;

System.out.println("Year " + i + " = " + (int)currentPopulation);

}

}

}

Ch. 1.13

public class Exercise\_13 {

public static void main(String[] args) {

// Variables for Cramer's formula

double a = 3.4;

double b = 50.2;

double c = 2.1;

double d = 0.55;

double e = 44.5;

double f = 5.9;

double x = (e \* d - b \* f) / (a \* d - b \* c);

double y = (a \* f - e \* c) / (a \* d - b \* c);

System.out.println("x = " + x + " y = " + y);

}

}