Chapter 5: Methods (Solutions)

Solution to Task 35: Baking a Cake

public class MyKaraIO extends KaraIO {

public void act() {

drawRectangle(21, 4);

stop();

}

public void drawRectangle(int width, int height) {

int i = 0;

while (i < height) {

putLeafs(width);

turnAround();

multiMove(width);

// go to next line

turnRight();

move();

turnRight();

i = i + 1;

}

}

public void putLeafs(int count) {

int i = 0;

while (i < count) {

putLeaf();

move();

i = i + 1;

}

}

public void multiMove(int steps) {

int i = 0;

while (i < steps) {

move();

i = i + 1;

}

}

public void turnAround() {

turnLeft();

turnLeft();

}

}

Solution to Task 36: Candles on Cake

public class MyKaraIO extends KaraIO {

public void act() {

drawRectangle(21, 4);

drawCandles(10);

stop();

}

public void drawCandles(int count) {

int i = 0;

while (i < count) {

move();

turnLeft();

putLeafs(3);

turnAround();

multiMove(3);

turnLeft();

move();

i = i + 1;

}

}

public void drawRectangle(int width, int height) {

// ...

}

public void putLeafs(int count) {

// ...

}

public void multiMove(int steps) {

// ...

}

public void turnAround() {

// ...

}

}

Solution to Task 37: Candles for Age

public class MyKaraIO extends KaraIO {

public void act() {

drawRectangle(21, 4);

int age = intInput("How old is your grandmother?");

drawCandles(age / 10);

stop();

}

public void drawCandles(int count) {

// ...

}

public void drawRectangle(int width, int height) {

// ...

}

public void putLeafs(int count) {

// ...

}

public void multiMove(int steps) {

// ...

}

public void turnAround() {

// ...

}

}

Solution to Task 38: Layered Cake

public class MyKaraIO extends KaraIO {

public void act() {

int age = intInput("How old is your grandmother?");

drawLayers(age / 10 - 5);

stop();

}

public void drawLayers(int layers) {

int currentWidth = 21;

int i = 0;

while (i < layers) {

drawRectangle(currentWidth, 2);

move();

move();

currentWidth = currentWidth - 4;

i = i + 1;

}

}

public void drawRectangle(int width, int height) {

// ...

}

public void putLeafs(int count) {

// ...

}

public void multiMove(int steps) {

// ...

}

public void turnAround() {

// ...

}

}